

**T**he days of our years are three-score years and ten (70)" according to the biblical psalm. Companies often don't live much longer. Indeed, the average life expectancy of a business in Western Europe or the US is less than 20 years! A scientific study published in the renowned Harvard Business Review in the late 1990s states there are only few companies in the world that reach the age of 100 or more. To survive in a world of constant change with all its crises and extreme situations and reach the age of 125 calls not only for a very particular mindset and attitude of the management, workforce and shareholders, but also for innovation strength and great flexibility. Although this principle is generally valid for all companies, it is especially true for a German company and particularly one like Rheinmetall that has had to overcome many difficult challenges since first being founded and whose existence was often at risk or called into question. Rheinmetall has long since overcome such difficulties – it is not only one of the oldest corporations in Germany but is also one of the very few companies that was established as a stock corporation from the outset. The company's eventful history is closely associated with political and social developments in Germany. Rheinmetall is aware of its history, including the darkest chapters of the past.

Although not directly involved in the establishment of the company, Rheinische Metallwaren- und Maschinenfabrik was soon perceived as the company of the ingenious inventor and organiser, the engineer Heinrich Ehrhardt. Like so many other successful Düsseldorf businessmen, Ehrhardt had his origins elsewhere. The beginnings were difficult; after all, it was necessary to succeed on a market that was dominated – in Germany and the rest of Europe – by the undisputed "king of the cannon" Krupp. Ehrhardt's quick and lasting success was ultimately attributable to two of his early inventions.

One of his inventions was the extrusion and drawing process to manufacture seamless steel tubes. Unlike the Mannesmann tubes, Ehrhardt's tubes were ideally suited as gun tubes and cartridge cases. The Rheinmetall trademark that was still valid ten years ago and consisted of a square in a circle stands for the steel block in the pressing mould and thus for the extrusion process that has hardly changed to this very day. The second invention that brought the company its breakthrough on the market was the barrel recoil cannon fit for field service. Since it was difficult to obtain the necessary steel qualities and machine tools, these cannons were self-manufactured which also helped maintain the technological edge on competitors.

At the 1902 industrial exhibition in Düsseldorf, the "Ehrhardt'schen Unternehmen" (Ehrhardt enterprises) as they were called in the official document, presented their products in a separate impressive hall. Alongside many machines, the exhibits displayed an approach that correlates closely with the "two pillar strategy" of the company, namely Security and Mobility and Defence and Automotive. "The display of military equipment showed that the factory (Rheinmetall) had focussed most effectively on the design of cannons for field service, meeting the requirements of weapons technology and simultaneously providing the necessary mobility." At the time, mobility was understood to mean wheels, axles, crankshafts and connecting rods as well as bicycles, motorbikes and motorised tricycles and even complete cars. Describing

his reaction to the exhibits, the reporter noted his "admiration for the inventive powers of a person who is a source of constant innovation and never stops at what he has achieved but keeps going."

In those days, the company had around 6,000 employees and 200 officials. At the beginning of World War I, Rheinmetall was the biggest arms company in the German Reich; the workforce had risen to nearly 8,000. Due to the war, this had increased to nearly 48,000 employees of which 9,000 were women by the end of the war in 1918. Wartime production consisted entirely of weapons and munitions manufacture.

After the cessation of hostilities, demand for military equipment practically collapsed from one day to the next; weapons and munitions were no longer needed and the production of such military equipment was banned by the victorious allies. This led to collective redundancies with serious social consequences. Only 30 years after being founded, the company was threatened with extinction. Yet the core workforce that remained and/or had returned after the war was not willing to give up. Indeed, they concentrated on what they were best at – and partly better than others. Quality steel was produced in factories with high-precision machines and staff who knew how to operate the machines. So it was decided to take the risk and start producing locomotives, steam ploughs, type-

writers and

chinery, and cameras (the "Exa" reflex camera) and even motors for mopeds. In 1956, Röchlingsche Eisen- und Stahlwerke GmbH bought Rheinmetall without Borsig. Rheinmetall once more started to produce military equipment when the German Bundeswehr was founded. The first products to leave the production line were guns, cannons and munitions that convinced customers due to the outstanding quality. These were followed by cannon tubes and gun carriages for armoured vehicles and artillery guns as well as tank destroyer guns, a standard tank turret (Leopard 1) and a self-propelled howitzer. Development of the 120mm smoothbore technology got under way in 1965. In cooperation, the best ever main battle tank (Leopard 2) and two armoured infantry fighting vehicles (Marder and Puma) were developed. Subsequently, the Boxer armoured fighting vehicle was developed in collaboration with the Dutch tank manufacturer Storck who was acquired at a later stage.

The cooperation with other companies that partly led to the creation of joint ventures or acquisitions was partly driven by increasingly stringent requirements imposed on modern weapon systems. However, these developments were mainly due to the budgetary constraints of NATO and EU member states and the tight restrictions on arms exports. In 1999, the defence systems capabilities of the Rheinmetall group were

Security  
and Mobility past and present

## Our raison d'être

calculation machines. From the mid 1920's onwards, the German Reich held a majority stake in Rheinmetall AG.

In 1936 the former locomotive factory Borsig (already acquired by Rheinmetall in 1933) and Rheinmetall merged to form Rheinmetall-Borsig AG. Ultimately, all stakes in the company were acquired by the government and integrated in the Hermann Göring works. From then on, production once again concentrated on military equipment, and not many resources were left to continue the peacetime production started after World War I. After large numbers of the workforce had been conscripted – like in World War I – the company was forced to use female employees and then foreign workers, prisoners of war and even prisoners from concentration camps.

The outcome of the pseudo prosperity was devastating and once more left the company with an uncertain future. The production facilities were largely destroyed, the plants in Central Germany were confiscated and largely disassembled; those in Western Germany were placed under the control of the Allies. Production activities were prohibited, only to be taken up again five years later. However, the portfolio was changed once again. In Düsseldorf, typewriters, shock absorbers, lifts and tanning machines as well as transport and conveyance facilities were manufactured with limited success. The independent subsidiary Borsig in Berlin built steam generators and calcification systems. The nationalised factory in Thuringia likewise manufactured office ma-

streamlined and organisationally concentrated under the roof of the newly founded Rheinmetall DeTec AG (Defence Technologies). In 2004, around 75 institutional investors acquired the Rheinmetall shares previously held by the Röchling group.

Rheinmetall's non-military activities have consistently expanded since the early 1980's. Not all new acquisitions turned out to be successful in establishing a second and possibly third cornerstone for business alongside the defence activity. Ultimately, the executive board opted for a two-pillar strategy with the corporate sectors Automotive and Defence. Automotive consists of the two formerly independent specialists Pierburg and Kolbenschmidt that were merged to create KSPG. The repeated attempt to float the automotive business on the stock market was abandoned. In the end, this decision transpired to be the best option since the two-pillar strategy has proven successful: for example, the weak development in the Defence sector is currently being compensated by profits from the Automotive sector.

Rheinmetall repeatedly had to master difficult situations that threatened its survival and has now reinforced its position for the foreseeable future thanks to its two pillar strategy and the production/product focus on two main areas of our lives that were already successful 125 years ago: Security and Mobility.

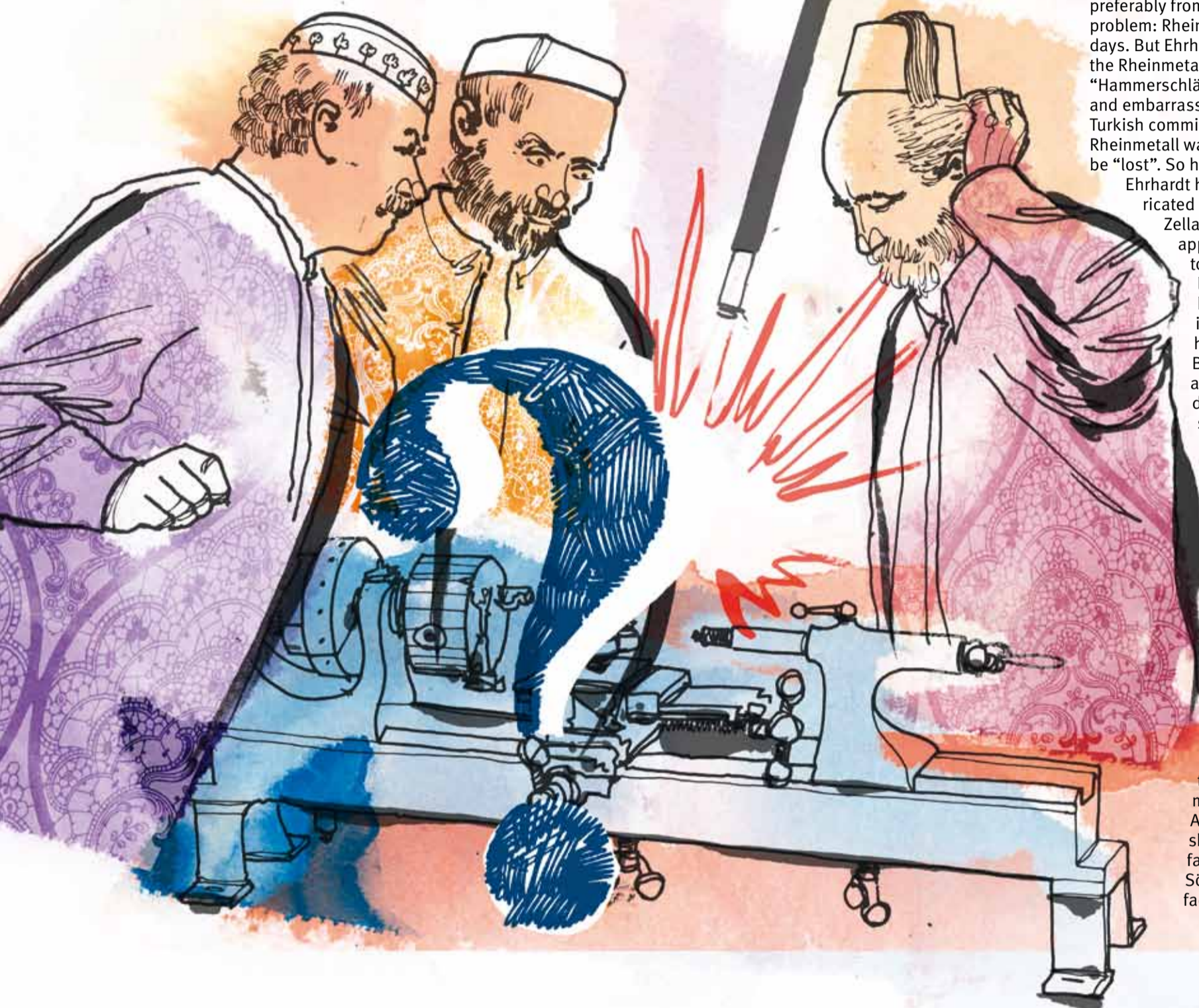
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Procurement practice in the days of the German Emperor

# Turkish Delight

## or an optical illusion?



The autobiographic notes of Heinrich Ehrhardt are full of anecdotes about Rheinmetall in the pre-war era. One of the many stories to be found relates to the Supervisory Board member of Rheinische Metallwaaren- und Maschinenfabrik, Major General z.D. Carl Gustav Becker (1842 – 1913), the former head of the empire's own artillery workshops.

Around 1899, Ehrhardt was hoping to win a big contract from Turkey: the once powerful state on the Bosphorus wanted to equip its army with new ammunition and fuses, preferably from one source. Ehrhardt had the following problem: Rheinmetall didn't manufacture fuses in those days. But Ehrhardt had invited a Turkish delegation to visit the Rheinmetall plant in Düsseldorf. In his autobiography "Hammerschläge", Heinrich Ehrhardt recalls how nervous and embarrassed he was, realising that as soon as the Turkish commission reported back to Constantinople that Rheinmetall was unable to fabricate fuses, the order would be "lost". So he decided to call their bluff.

Ehrhardt had the brand-new fuses that had been fabricated especially for firing tests at his factory in Zella-Mehls delivered to Düsseldorf, had them appropriately fixed in the lathes and machine tools of the Düsseldorf-Derendorf factory and let the workers work on them. As Ehrhardt himself was unable to accompany the Turkish visitors due to other prior commitments, he asked his Supervisory Board colleague Becker to give the Turks a tour of the factory and convince them that Rheinmetall produces fuses. Becker thought something was seriously wrong with Ehrhardt. This trick was totally anathema to Becker as a Prussian officer; Ehrhardt and Becker thereupon had a serious dispute in the course of which "I probably gave him a piece of my mind rather too enthusiastically" recalled Becker. The result of this heated discussion was that Becker immediately stepped down from the Supervisory Board.

Fortunately, this did not affect the order from Turkey. Apparently, Ehrhardt managed to move his other appointment and had no qualms in showing his Turkish guests the "fake" fuse factory. At the request of his Supervisory Board colleagues, he even managed to persuade Becker to remain on the board, although this naturally called for a sincere apology to the old warhorse. Interestingly, this is not mentioned in Ehrhardt's memoirs.

And the ammunition was also delivered: shortly afterwards, Rheinmetall acquired the factory belonging to Nicolaus von Dreyse in Sömmerda – giving Ehrhardt the skill and the facilities to manufacture fuses. **lb**

Rumours already existed during his lifetime. In his autobiography "Hammerschläge", he described the decline of his large family that had lost its fortune at the beginning of the 19th century following the Napoleonic Wars. His grandfather, formerly a wealthy gunsmith, and family moved out of their villa and into a very small house by the woods to the north of Eisenach in the Thuringian Forest. Heinrich was born the son of a silviculturalist who supported himself and his family with occasional jobs. Heinrich Ehrhardt himself described this part of his history. In his biography, he notes that although he wasn't a nobleman he nevertheless had noble blood in his veins. His grandmother was born a Graf (meaning countess) from Gräfenroda.

# Nobleman or just a clever guy?

Engineer Heinrich Ehrhardt from Thuringia established and started to expand the Düsseldorf-based Rheinische Metallwaaren- und Maschinenfabrik from 1889 onwards. Right from the start until 1920 he was a member of the company's Supervisory Board which he chaired from 1897 onwards. Until today, his origins are an unresolved myth. Nonetheless, it is astonishing how the orphan Ehrhardt managed to overcome tough challenges with shrewdness and how the young man worked his way up in the world with perseverance and ambition in spite of many setbacks.

In reality, it is highly probable that Ehrhardt never actually got to know his father which is why he was given the maiden name Ehrhardt of his mother Barbara. A former Thuringian state archivist in Weimar, Dr. Wolfgang Huschke, discovered quite a different story in the church records in the 1950s: his research indicated that Heinrich's father may have been a journeyman locksmith and later train driver called Gottlieb Reuther from Weinsberg in Württemberg.

In her biography of 1969, Maria Fischer-Ehrhardt tried to air the secret of her father Heinrich's supposed nobility: according to her sources, a certain duke (Eugen von Württemberg) and commander of the Prussian regiment had fallen in love with the beautiful Barbara around one year before Heinrich's birth. He fathered the child but the love affair was ill-fated from the outset: Eugen had to leave his mistress to follow the call of the King of Prussia. Barbara told

her parents and grandparents about the extramarital affair and was thereupon disowned by her family. When her father died one year later, she made up with her mother and hoped that Eugen would return to her. This sounds like a fairytale or is it indeed the truth? The question of Heinrich Ehrhardt's true origin is shrouded in myth to this very day.

It is, however, undisputed that Heinrich Ehrhardt was a remarkable personality. In his autobiography, he describes how his upbringing by his grandmother – and without parents – left a deep mark on him: the hard work on the farm and in the dairy were instructive, and the four to five year-old lad occasionally felt he needed a special treat after all the hard work: already at this early age, he showed signs of ingenuity, poking a straw through the holes of the milk container to secretly drink up some of the cream from the pot. His idea for a first hydraulic "suction device" was discovered but he used his shrewdness to his benefit on many occasions in the years to come.

This was also the case in the forge belonging to this cousin, the mechanic Peter Ehrhardt who was a tough teacher to 14 year-old Ehrhardt. He had to collect timber for the workshop with lathe and also bring the evil-tem-

pered Peter his daily bowl of soup at lunchtime. Once, Heinrich tripped on the old wooden staircase, the soup was spilt onto the floor and – terrified at the prospect of his cousin's anger – Heinrich wiped the soup off the wooden floorboards back into the bowl. His cousin didn't notice what had happened, had his soup but was surprised by the grit on his teeth. Might this have been due to the sand on the floorboards?

Heinrich's apprenticeship then took a turn for the better: after his cousin had contracted an eye disease, Heinrich was offered the chance to run the business. But even before the four-year apprenticeship had come to an end, the two cousins had such a serious disagreement that Heinrich was forced to flee. His life in the following years was fairly unsettled with various professional stops. His strong leadership and his desire to acquire more knowledge motivated him to collect a lot of experience in many different areas, for instance, as a designer of distillation machines, as a mechanic, a works master and inventor in the field of weapons technology. The man who came from a smallholding and craftsman's family embarked on an impressive lifelong journey. He is remembered as an assertive leader with the willpower to succeed. **ann**



13.4.1889  
Rheinische Metallwaren- und Maschinenfabrik is established

1889  
The Eiffel Tower in Paris is completed



1890  
Emperor Wilhelm II dismisses Chancellor Otto von Bismarck

1892  
Heinrich Ehrhardt invents the extrusion and drawing process to manufacture seamless tubes



1892  
The first Sherlock Holmes stories are published in Great Britain



1894  
Rheinmetall's shares are first listed on the stock exchange



1896  
Heinrich Ehrhardt and Konrad Haußner develop the first barrel recoil cannon fit for field service



1896  
The world's shortest war ever between Great Britain and Zanzibar comes to an end after only 38 minutes

1897  
The Prater Big Wheel in Vienna is taken into service



1899  
Aspirin becomes a registered trade mark

1899  
Rheinmetall acquires the proving ground at Unterlüß



1900  
Start of the Boxer Rebellion in China

1901  
Henry Dunant is the first Nobel Peace Prize winner

1901  
Rheinmetall acquires the fuse factory at Sömmerda



1909  
Bernhard Pierburg establishes Stahlhandels-gesellschaft Gebr. Pierburg oHG in Berlin

1910  
Karl Schmidt establishes Deutsche Ölfuerungs-werke in Heilbronn, the precursor of Kolbenschmidt



1914  
Start of World War I

1918  
Arms production ban introduced

He was one of the closest and most loyal employees of Heinrich Ehrhardt, and one of the most able engineers working for Rheinische Metallwaren- und Maschinenfabrik in the years prior to World War I. The man in question is Carl Völler, chief engineer at Rheinmetall, weapons designer and plant manager at Düsseldorf.

Coming from his first job at the Cologne Helios works, the qualified lathe operator Völler probably joined the Eisenach vehicle factory also managed by Heinrich Ehrhardt at the end of the 19th century. In Eisenach, he replaced the engineer Konrad Haußner, the co-inventor of the famous barrel recoil cannon, as head of the artillery design office. Haußner had fallen out with Ehrhardt and emigrated to Argentina.

Völler moved to Rheinmetall in 1903, following the relocation of artillery design to Düsseldorf. He was appointed general manager in 1912, calling himself Rheinmetall director from then onwards. The young company owed him the 7.5cm mountain cannon "System Ehrhardt" for which Emperor Wilhelm II distinguished him with the colonial medal and that was officially fielded by the army in 1909. The heavy mine thrower developed in 1909 by Völler in collaboration with the corps of pioneers and engineers of the Großer Generalstab (Great General Staff) for attacks on fortified positions was particularly spectacular.

Personally, Völler felt more committed to Heinrich Ehrhardt than to Rheinmetall. In 1908, when he found out quite by accident that Krupp had secretly acquired the majority of Rheinmetall shares through the Stock Exchange, he was seriously worried: less about the future of the company as such, but mainly that the competitor from Essen might constrain his and Ehrhardt's activities in the field of cannon design. So he wrote a letter to Ehrhardt, assuring him of the following: "I definitely won't join Krupp. If Krupp buys up our Rheinische Company, we should simply concentrate all on our energy on building the cannon in Zella." He also recommended the "establishment of a totally new Ehrhardt cannon factory displaying the full name of Ehrhardt and not as Rh. M.M."

Luckily for him – and for Rheinmetall – things never got this bad and Völler stayed with "Rheinische" or "The Cartridge" as the locals lovingly called the Düsseldorf factory. His brilliant career as an arms designer came to a tragic end in 1916 when he suffered fatal injuries from an accident at the firing range in Unterlüß. The only accident report that still exists was written by the later chief designer Carl Waninger: In his collection of anecdotes entitled "Knallbonbon", he gives a brief account of this event that was so tragic



Carl Völler, Ehrhardt's most loyal engineer

**"I definitely won't join Krupp!"**

for Rheinmetall and Carl Völler: "During a firing exercise, Mr. Völler stuck his head out just a little bit too far as a result of which he was hit by a very small piece of metal. He asked for a cognac and to be taken to the hospital in Celle where he died a few weeks later." Völler's popularity with the workforce in Düsseldorf was all too evident as the long funeral procession moved from the Rheinmetall premises on Ulmenstrasse to the northern cemetery where his large, artistically designed tombstone (that was restored a few years ago) remains to this very day. **lb**

Today, hall 29 presents the Gerry Weber collection

## From prison compound to catwalk

Hall 29 – today owned by the internationally renowned and successful fashion business Gerry Weber – is generally turned into an international hotspot during the Düsseldorf fashion fairs. Right next door to Rheinmetall, the collections for the next winter and summer season are presented to the world of fashion, worn by beautiful models on the catwalk. Neither the models nor any of the other people engaged in the fashion business are likely to know that they are continuing a 100 year-old tradition.

Ladies already used to walk up and down the courtyard back in 1916, in full view of the production hall 29 that was under construction at the time. But these ladies were different: they were female convicts and their catwalk was the prison compound called the "Weiberspazierhof".

The prison authorities didn't find the constellation terribly amusing in those days. They believed a view of the prison compound should be avoided under all circumstances. The responsible authorities and executive board of Rheinische Metallwaren- und Maschinenfabrik A.G. exchanged a lot of correspondence about the rules and regulations applicable to the construction of the hall that was urgently needed for the production of arms in 1916, including an own shooting range with adequate line-of-sight to enable civil servants to test and approve essential military goods. The company emphasised the importance of the project – not only in the interest of the factory but also with a view to its outstanding relevance for national defence.

The construction of the production hall was ultimately given the go-ahead under strict conditions. Any visual contact with the prison compound was strictly forbidden. It was agreed that the builders would always work behind a two meter high wooden screen preventing any view of the women's compound. Furthermore, a new boundary wall of respectable height – namely four meters – and without any openings was to be built! It was strictly forbidden for the builders to establish contact with the prisoners by calling, giving signs, passing them gifts or anything similar throughout the building project. Incidentally, the prison has since been moved to the neighbouring town of Ratingen, screened off by high walls and surrounded by 110 hectares of recreational area with two lakes and extensive green areas including a well developed network of paths used by walkers, cyclists and dogs for leisure time activities today.



When media reported in 2011 that Rheinmetall Defence had booked an order to deliver a simulation-based training center to Russia, this caused quite a sensation. After all, Russia and the powerful Soviet Union had for many years been the enemy that needed to be deterred and fought with effective arms like the Leopard 2 main battle tank developed and manufactured with the involvement of Rheinmetall. The geopolitical crisis that we all know as the Cold War didn't start in 1945 but has its origins in the final year of World War I. The October Revolution (1917), the Brest-Litovsk peace treaty with Germany and the formation of the Soviet Union had created a strong antagonism to the "bourgeoisie" states of the western hemisphere. These naturally included Germany where communist coups were successfully overcome in the early days of the Weimar Republic. Yet, Germany and the Soviet Union also had common interests. Moscow's efforts to keep republican Germany out of the association of western powers were in keeping with the urgent desire of many Germans to annul the Treaty of Versailles (that was understood as a humiliation) – even if this involved help from the Soviets.

It was therefore hardly surprising that developing trade relations from 1921 onwards were beneficial to the German export industry. Even if there had been a realistic chance of an international trade agreement between the East and West, this ultimately failed in 1922 due to the lack of accord between England and France. For fear of one of the two parties reaching an agreement with the western powers, the Treaty of Rapallo was thereupon signed on 16th April 1922 by the Foreign Minister of the Soviet Union Georgi

radio-operators and gunners in tanks and combat vehicle crews were given tactical training there. The German permanent staff included technicians and engineers from Krupp and Rheinmetall. Rheinmetall provided specially developed

The six heavy tractors – two each from Rheinmetall, Krupp and Daimler-Benz – arrived at Kama in July 1929 and were tested from September onwards. Sadly, a tragedy occurred right at the beginning when Rheinmetall supervisor Kerres suffered fatal injuries during the first amphibian trial in the Kaban Lake on 30th October 1929. Trials in water were disbanded after the accident.

On 4th June 1930, Rheinmetall "light-weight tractors" with a 3.7cm cannon and a machine gun in a 360° rotating turret arrived at Kama. The performance of these vehicles was so good that they contributed significantly to the technical, tactical and firing training of personnel. Nonetheless, the "tractors" were plagued by various technical problems. Yet as the advancement of a tank with a front-mounted engine was no longer thought important, the

fundamental elimination of technical problems was considered unnecessary. Instead, Rheinmetall and Krupp concentrated on the further development of the heavy tank at the command of the lieutenant colonel (and

developed "large tractors" for the purpose. These were two 16 ton heavy vehi-

Amazing transformation

# From tractor to tank

cles equipped with 7.5cm cannons. The German Army Weapons Agency also gave development orders to Krupp and Daimler-Benz. Around 1927/1928 Rheinmetall and Krupp also received an order to develop tanks (under the cover name "light-weight tractors") of the 9 ton category with an armour-piercing 3.7cm weapon.

Both the heavy and light-weight tractors delivered to Russia were declared as agricultural machinery in order to bypass the export ban under the Treaty of Versailles. This had been negotiated by none other than the Chief of the later Weapons Agency General a.D. Max Ludwig. It was Ludwig who proposed to the Foreign Office in Berlin that caterpillar tractors should be delivered to Russia – stating that these would serve as chassis for the tanks. "The tanks would then be further extended in Russia. This would warrant that the tanks really worked – and the delivery would not be in violation of the Versailles Treaty since caterpillar tractors could just as well be used for agricultural purposes."

later lieutenant general) Heinz Guderian.

Rheinmetall was requested to develop a heavy tank referred to as the "new construction vehicle". Rheinmetall engineer Jakob Engel who had worked in Kama recalled Rheinmetall building two vehicles – a tank and turret in mild steel. Although these were superior to the contender models from Krupp and Daimler-Benz, tank developments were to move in a different direction in the following years. Extremely heavy armoured vehicles with several turrets and large crews proved to be technically and tactically inappropriate in the course of the 1930s. Indeed, the multi-turret tanks from Rheinmetall were to be the last of their type ever to be built in Germany.

The tank school in Kama was closed on 15th September 1933 and the vehicles were returned to Germany via Leningrad and Szczecin after the seizure of power by Hitler's national socialist party. The light-weight and heavy tractors were still used for training purposes at the tank firing school at Putlos for several years, after which they disappeared in the museums of several barracks. **lb**



Chicherin and his German counterpart Walther Rathenau.

This triggered a development that also involved Rheinische Metallwaaren- und Maschinenfabrik in Düsseldorf. Although no secret military agreement had been reached between the two states in Rapallo, the trade agreements nonetheless meant that the Soviet Union could receive military support from Germany while companies like Rheinmetall and Krupp were given the opportunity to test weapons and vehicles. The strict arms production ban under the Treaty of Versailles prohibited this in Germany.

The Kama tank school on the Volga River opened in the summer of 1929 was important for Rheinmetall. Both German and Russian soldiers were trained as drivers,



Supervisory Board chairman opts for name change

# Just a boyish prank?

Over the years, numerous prominent personalities have served on the Rheinmetall Supervisory Board, and some of these characters are swathed in mystery for some reason or other. One such person is Dr. Ing. H.c. Moritz von der Porten. Born in 1879 in Hamburg, he became one of the most important industrialists of the Weimar Republic. As director general of Vereinigte Aluminiumwerke and Supervisory Board member of Vereinigte Industrie-Anlagen AG that held a majority stake in Rheinmetall, he chaired the Rheinmetall Supervisory Board between 1929 and 1932. Although von der Porten's biography is fairly well recorded, nobody knows why he suddenly decided to change his first name. Interestingly, the Rheinmetall annual reports from 1931 onwards refer to Max von der Porten, and this is the name referenced in all documents relating to business history. Only the archives of the Technical University of Brunswick have evidence of his original first name Moritz under which Brunswick University also awarded him an honorary doctorate in 1921. Oddly, the name change is not mentioned in any of the biographical writings. Nonetheless, there is no doubt whatsoever that it was always the same person – although his first name varied. Even before the national socialists came to power, von der Porten left Rheinmetall and served as an advisor for trade and industry to the Turkish government. He emigrated to the USA in 1940 and died in New York on September 6th, 1943 – under the name of Max and not Moritz. **lb**

1918	On 9th November 1918, Philipp Scheidemann and Karl Liebknecht proclaim the German Republic, marking the birth of the Weimar Republic, the first parliamentary democracy in Germany (1918-1933)	1918	The Armistice at Compiègne on 11th November marks the end of World War I
1919	Walter Gropius founds the Bauhaus School for Design in Weimar	1919	Max Planck wins the Nobel Prize for Physics
1920	The Salzburg Festival is founded	1920	Piston production is started at Deutsche Ölfeuerungswerke in Neckarsulm
	Following the arms production ban stipulated in the Treaty of Versailles, Rheinmetall in Düsseldorf launches manufacture of locomotives, steam ploughs and other agricultural equipment		
1921	Albert Einstein wins the Nobel Prize for Physics	1921	Due to the non-fulfilment of the Treaty of Versailles, French troops occupy the Rhineland and Ruhr region. This also affects the Rheinmetall factory in Düsseldorf
1922	Ernst Alexanderson transmits the first fax across the Atlantic	1922	Howard Carter discovers the tomb of Tutankhamen
1924	The companies Benz & Co Rheinische Gasmotorenfabrik Mannheim and Daimler-Motoren-Gesellschaft merge to form Daimler-Benz AG headquartered in Berlin	1925	The German Empire acquires a majority stake in Rheinmetall via VIAG
1926	The Hindenberg dam joining the Island of Sylt and mainland is opened	1927	Charles Lindbergh makes the first non-stop flight from New York to Paris

# Rheinmetall in Phantasialand



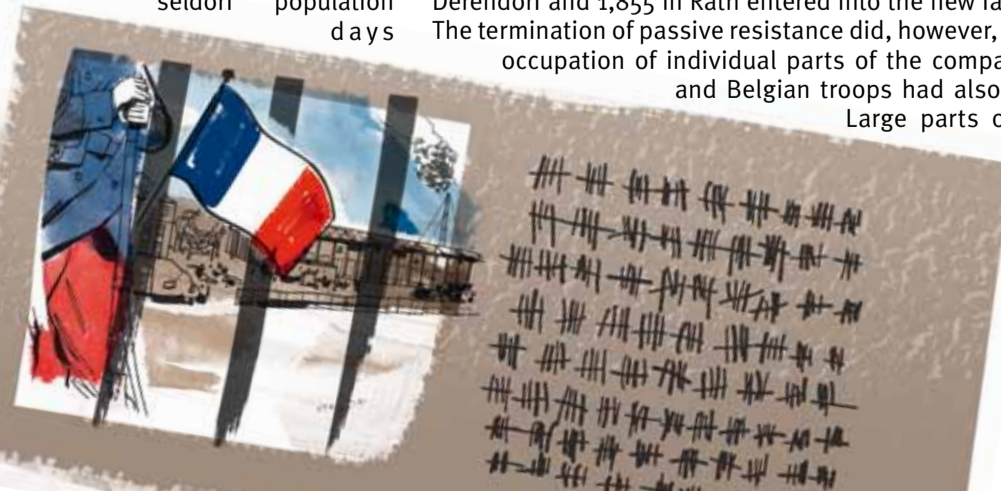
The roles were clear: as the puppet master, Richard Schmidt was the creative head; Gottfried Löffelhardt came from one of Europe's biggest fairground families. Together, they dreamt of creating an American-style amusement park in Germany. No sooner said than done! The theme park for which Richard Schmidt had created the puppets opened its gates near the lake by Brühl not far from

Cologne on April 30th, 1967. Attractions included a vintage railway and a western express; a cable car crossing the lake was added at a later stage. From its humble beginnings, the leisure center has developed into an impressive 28 hectare amusement park called Phantasialand attracting around 1.75 million visitors each year – an impressive career for the former mining area. The lake is a relic from the open cast lignite mine that existed in the area. One of the companies that used to be actively involved in the mine was the present-day Rheinmetall AG. In 1920, Rheinmetall – known as Rheinische Metallwaren- und Maschinenfabrik AG in those days – had acquired a majority stake in the factory Braunkohle- und Brikettfabrik Berggeist AG (established in 1908) in order to safeguard the power supply for its own steel works. Demand for the increasingly expensive fuel had risen in the wake of the industrialisation. The open cast mining sector in the Rhineland flourished, but by 1965 the coal in the Berggeist mine had been extracted so that the mine was shut down. Rheinmetall itself had already divested its share in the mine around 1925 – the reasons for this are still not known. Two years after the shutdown, Schmidt and Löffelhardt transformed the Berggeist mine into an amusement park. In 1974, the first white-water ride was opened and turned out to be a true crowd-puller. Modern-day visitors will hardly find a ride across rough waters exciting. What they want to see is the Temple of the Night Hawk or the Deep in Africa theme park with its inverted rollercoaster Black Mamba including terrifying twists and spectacular screws. In hindsight, it has always been an area of intense activity! **uv**

## Rheinmetall management ends up in jail

# Resistance to French occupation

The defeat of the German empire in World War I marked the beginning of the most difficult period in Rheinmetall's history at the time: revolutionary activities and street fighting, strikes and company occupations by rioting workers were part of everyday life. The conditions of the Armistice Agreement and Treaty of Versailles prohibited arms production. The lifetime achievement of Heinrich Ehrhardt who had retired from "his" Rheinmetall as an old man in 1920 seemingly lay in ruins. He was only able to witness the beginnings of reconstruction from a distance at Zella-Mehlis. At the time, Rheinmetall built locomotives, carriages and agricultural machinery. On 14th February 1920, the first carriage left the factory at Ulmenstrasse. Only four months later on 14th July, the first locomotive – the steam engine G10 for freight trains was delivered to the German Reichsbahn. From 1922 onwards, Rheinmetall also built locomotives of the G12 series – the heaviest freight locomotive of the German Reichsbahn and the first German standard locomotive according to the annual report of the company. Although the order was lucrative, proper business development was impossible at the time. One event in particular has a big influence on the development of the company: the occupation of the Rhineland and the Ruhr region by Belgian and French troops on March 8th, 1921 due to inadequate proposals of the German government in conjunction with reparation demands. Besides, the French wanted to take possession of the coal and ore mines in the Ruhr region. The Düsseldorf factory of Rheinische Metallwaren- und Maschinenfabrik was one of the businesses occupied in the Rhineland. On May 9th, 1921, French troops marched into Plant V and occupied the site until September 16th. Riots and strikes were not common at the time because there was still a precarious level of normality between occupying troops, the Düsseldorf population and the industry during the early of the French and Belgian occupation of Düsseldorf. However, this changed when the French and Belgians occupied the entire Ruhr region on January 11th, 1923 on the pretext that reparation payments were overdue. As a locomotive and carriage manufacturer, Rheinmetall was important for the occupying troops since only a few days after the occupa-



Düsseldorf. However, like the management of the Düsseldorf welding works of Mannesmann, the Rheinmetall management refused to cooperate with the occupying forces. The company newspaper of latter day Rheinmetall-Borsig describes how the French and Belgian troops tried to seize locomotives for the Franco-Belgian "Regiebahn". "About a dozen finally assembled locomotives stood in the production hall, but as such acts of violence had been anticipated by the management, countermeasures had been taken: the gates were locked, the tracks and railroad switches had been destroyed and vital components removed from the machines and hidden." Ultimately, troops forced their way into the plant on March 17th, 1923, brought the entire factory to a standstill and seized the locomotives, freight and tank carriages. The two Rheinmetall management board members Hans Eltze and Hermann Potthoff were arrested on grounds of sabotage on March 23rd and April 19th, and imprisoned in the neighbouring Ulmer Höh where "they were joined by Krupp von Bohlen-Halbach and Schageter and his comrades." Efficient production was impossible under the prevailing conditions. Production largely stood still, and the employees busied themselves with tidying up. The passive resistance ended in the summer of 1923, as a result of which the Rheinmetall workforce ended its strike on September 26th of the same year. In the annual report of that year, the management stated that "8,859 workers and civil servants in Derendorf and 1,855 in Rath entered into the new fabrication period". The termination of passive resistance did, however, not mean that the occupation of individual parts of the company by the French and Belgian troops had also come to an end.

Large parts of the Düsseldorf plant were supervised by French troops in the years 1924/1925. In fact, the occupiers didn't leave until August 6th, 1925. **lb**

1928  
Walt Disney invents the legendary Micky Mouse



1928  
Heinrich Ehrhardt dies in Zella-Mehlis



1929  
October 25: the Wall Street Crash marks the beginning of the world economic crisis



1930  
The boxer Max Schmeling is the world heavyweight champion



1931  
The Empire State Building overtakes the Chrysler Building as the highest in the world

1931  
Deutsche Vergaser-Gesellschaft mbH is established in Berlin



1932  
Mahatma Ghandi is arrested by the British colonial authorities and goes on hunger strike in prison (Pune)



1932  
The Graf Zepelin airship LZ127 starts commercial operations to South America



1933  
The National Socialist Party under Adolf Hitler comes to power in the German Empire, marking the end of the Weimar Republic and beginning of the Third Reich



1933  
The company Henschel & Sohn AG in Kassel wins the first development contract for the light armoured vehicle I



1934  
First TV transmission in Germany



1935  
The racial ideology of the Nazi Regime is proclaimed in the Nuremberg Laws

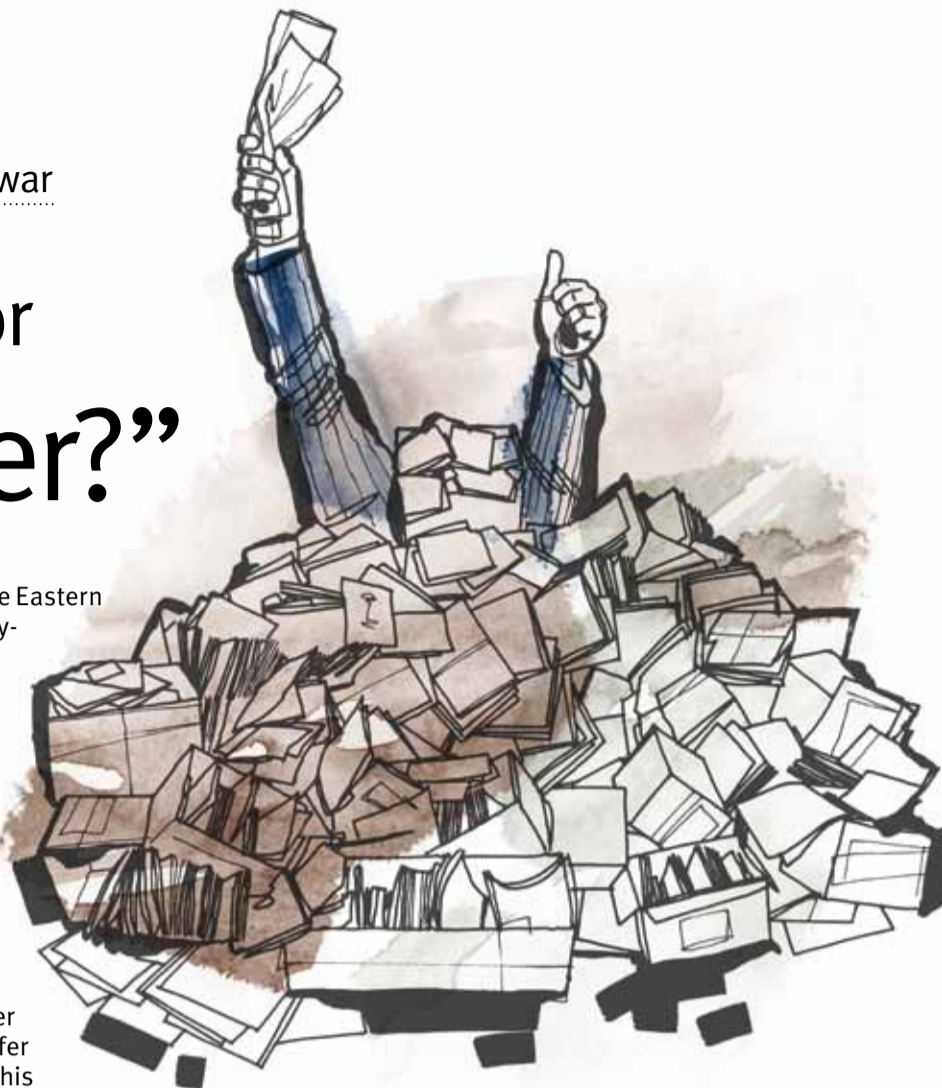
1935  
The first aluminium plain bearings are manufactured by Karl Schmidt GmbH



Red tape abundance even in times of war

# “A factory or piles of paper?”

In 1943 the German Army was engaged in fierce combat on the Eastern and Western Front. Numerous Rheinmetall-Borsig AG employees had been conscripted and many had already lost their lives on the battlefield. Women and forced labourers had taken their place in arms production. However, something that still functioned perfectly in spite of all the hardship was the German bureaucracy. Even the weapons production needed for the much hoped for Final Victory (Endsieg) was slowed down by abundant red tape. This applied both to the recruitment of labour – even of forced labourers – and to the relocation of factories. When the allies started their day and night time air raids of major cities like Berlin and Düsseldorf damaging residential buildings and production facilities alike, Rheinmetall-Borsig’s plant management tried to relocate production of the 8.8cm anti-aircraft gun and other important guns to requisitioned property in the allegedly safer eastern regions of the German Reich. On several occasions, this was prevented by red tape. However, the administrators of German often had no other choice. Only thus was it possible to stop big companies from securing large factory halls to get access to cheap labour and facilities. In one case, one of the Berlin plant managers of the subsidiary Maget (standing for Maschinen- und Gerätebau Tegel) got extremely frustrated when in 1942 the regulatory authorities demanded the usual paperwork for the erection of a new building to increase production of the MG42 machine gun. They demanded details on building statics, terrain structure, height, the intended production activity and many other things. Like many other vital wartime processes, this administrative procedure was lengthy. In the end, managing director Priebe got involved and wrote a strongly worded complaint: “Do you want us to build a plant for machine gun production as quickly as possible or do you want us to dump a truckload full of paper in front of your door?” This clearly turned out to be effective – only a few months later, construction work was completed and production finally got under way.



thoroughness that survived even in times of war

A former forced labourer remembers

# “I dreamt of leaving the camp”



Many forced labourers had to work for Rheinmetall-Borsig in World War II. We wouldn’t know a lot about their fate if some of them hadn’t written letters describing their experience. They did this because – to obtain financial compensation from the trust set up by the German government and German industry in 1999 – they needed a certificate from Rheinmetall proving they had been subjected to forced labour.

One such person was Sascha A. who had worked on the carpenter’s bench at the Düsseldorf-Derendorf plant. “The German workers were kind and warm-hearted. They gave us food to eat.” By contrast, his memories of two of his German colleagues are less positive: “Two young Germans called Otto and Kurt worked next to me. Otto was intelligent, wore spectacles and was a fascist who wanted to shoot all communists on the Eastern Front.” Sascha A. did not say he was treated badly by them. His foreman Johann was a member of the national socialist party but Sascha still didn’t think he was inhuman. He described him as a “small man with the fascist symbol pinned to his suit. He was strict but honest.”

One point is particularly touching in the light of the great suffering of forced labourers at Rheinmetall in Düsseldorf, Berlin and elsewhere: “I enjoyed drawing. I started to draw French labourers and they sent the portraits to their homes in France. They gave me pencils and paper and they paid for my artwork with bread, cigarettes and tinned food.” It is not known where he drew the pictures, whether at the forced labour camp in Grashofstrasse or at the factory during breaks from work. Yet the hobby of the talented forced labourer did not go unnoticed. “The foreman found out. He showed me a photograph of a five-year-old girl. I agreed to produce a portrait of the young girl. The girl had died. The portrait of the girl was drawn in the dining room for Germans.”

The fact that the foreman Johann let Sascha A. into the dining room reserved for Germans shows that foreigners weren’t normally given access to this room but used a separate dining area. In fact, forced labourers were not allowed to use the communal facilities of the Germans; the plans of the Düsseldorf-Derendorf plant show separate communal areas for labourers from Eastern regions.

Another story reported by Sascha A. concerned a failed attempt to escape from the prison camp. “I dreamt of leaving the camp. My dream came true. I was on the street next to the Art Academy. I was admiring pictures by German painters. Then the police grabbed me and took me to the Gestapo.” What did the Gestapo do to Sascha A? Why didn’t he speak of his time there? Perhaps his experience was too painful to remember....

1936	The Winter Olympics in Garmisch Partenkirchen and Summer Olympics in Berlin are held under the influence of Nazi propaganda	1936	Rheinische Metallwaren- und Maschinenfabrik AG and A. Borsig Maschinenbau AG in Berlin are merged to form Rheinmetall-Borsig AG
1936	The Afro-American Jesse Owens is the most successful athlete of the Summer Olympics	1936	Rheinmetall-Borsig employee and backstroke swimmer Anny Stolte participates in the Berlin Summer Olympics
1937		1937	The biggest explosion in Rheinmetall’s history killing 14 people occurs at Unterlüß
1938	Crystal Night from 9th to 10th November	1938	The plant for production of nitrocellulose is established at Aschau am Inn
1939	The German invasion of Poland on 1st September 1939 marks the beginning of World War II	1939	Rheinmetall-Borsig is allocated to the biggest German corporation, Reichswerke AG Hermann Göring
1940	The brothers Richard and Maurice McDonald open the first McDonald’s restaurant in San Bernardino, California	1940	Charlie Chaplain’s famous film “The Great Dictator” is released in New York
1940	Kolbenschmidt delivers the first large piston with a diameter in excess of 500 mm	1940	Henschel develops the Tiger armoured combat vehicle
1941	On 12th May, Konrad Zuse presents the Z3 computer, the world’s first functional digital computer	1941	Rheinmetall-Borsig starts with the development of the four-stage solid-propellant ballistic rocket Rheintor (Rhine Messenger)
1942	On 1st January, 26 states sign the founding declaration of the United Nations in Washington D.C.	1942	Höveler & Dieckhaus in Papenburg launches plain bearing production
1943	Warsaw Ghetto Uprising starts on 19th April	1943	Air raids on Rheinmetall-Borsig plants in Düsseldorf and Berlin cause widespread damage
1944	Claus Schenk Graf Stauffenberg’s attempt to assassinate Hitler on 20th July fails	1944	Production of carburetors by Deutsche Vergaser-Gesellschaft is moved from Berlin to Lausitz
1945	The Red Army liberates the greatest German concentration camp Auschwitz-Birkenau on 27th January 1945; afterwards the world is informed about the atrocities.	1945	For the very first time, an atom bomb is detonated on 16th July in the desert of New Mexico (USA).

At the end of World War II, Rheinmetall-Borsig AG is seized by the victorious allies and the plants are occupied



Farmers in Brambostel dispossessed

## “Access strictly forbidden!”

Hartmut and Heinrich Johannes from Brambostel are only distant relatives, yet their neighbouring farmsteads have one thing in common: in former times, their respective families were expelled from their farms Brambostel 2 and Brambostel 3.

During World War II, development, production and testing activities at Rheinmetall-Borsig were at full-speed, and this wasn't everything. The German Reichswehr had taken over the proving grounds in Unterlüß. The German air force used the shooting range to fire from the Lorenz position to the west of the main fire stand and the German army operated from the Gut Mitte location. All in all, more than 2000 shots were fired from 20 different firing positions in just one hour. Only 20% of all practice firing was actually carried out by Rheinmetall-Borsig in Unterlüß. In terms of related risks and sequence of firing, none of the military services showed any consideration towards each other or towards Rheinmetall, for that matter. Hit patterns had to be collected, fired cartridges retrieved and special explosive tests conducted. This stopped all firing activities each time this was necessary. Consequently, a second firing range was sought in 1941 but this caused problems: the hit area was located on populated farmland with farmhouses in the district of Brambostel.

Initially, the inhabitants of Brambostel had to leave their houses and farms at shooting times only. “The area was blocked off and nobody was given access”, recalls Hartmut Johannes. On 6th November 1942, a dispossession order decreed that the farmland in Brambostel had to be allocated to Rheinmetall-Borsig. From then on, the families were strictly forbidden to enter their properties. Most of the houses were demolished, large areas of woodland were deforested for the shooting range and hit areas, wood and construction material was sold off. The properties had thus been devalued. Furthermore, a penal colony from Torgau was housed in a specially converted barn belonging to Albert Johannes. Hartmut and Heinrich were still young when their fathers Ernst and Albert Johannes had to leave their Brambostel farms

with their families. Whereas Albert Johannes and family were actually moved to a farm in the district of Lüneburg in 1944, whose owner had likewise been dispossessed and – as a hostile British national – was interned, Ernst Johannes was never allocated a new farm in the war. “We stayed with friends and acquaintances in Eimke”, recalls his son Hartmut. “We hunted for a living – this was naturally illegal. The hunting rights were likewise with Rheinmetall. Our property was stored in various places, and much of it was burnt when Eimke was defended against the British forces“. Albert Johannes including his wife and sons Heinrich and Alfred had to leave their substitute farm immediately after the end of World War II. The British occupiers returned the property to the former owner who had been freed.

On May 25th 1945, Rheinmetall-Borsig informed Ernst and Albert Johannes “that we have no further claim to the utilisation of your property in Brambostel”. But the families encountered a lot of problems on their return. Former inhabitants of Brambostel had to share their destroyed farmsteads with refugees, without electrical power and without being able to farm their land properly. An architect from Munster was requested to rebuild the houses and utility buildings, and a British major had the neglected fields ploughed with a small armoured personnel carrier. Theoretically, the cost of reconstruction should have been borne by Rheinmetall, but the company's accounts had been frozen by the Allies. Later, Rheinmetall stated that the dispossession had taken place at the order of the naval headquarters and that Rheinmetall had reaped no benefit – and only had a cost burden – from the dispossession. The dispossessed farmers nevertheless insisted they were entitled to compensation payments and successfully claimed damages ten years later.

After returning home, neither Albert nor Ernst Johannes had feelings of resentment against Rheinmetall. Heinrich Johannes reports that his father always claimed that Rheinmetall had lost the war just like the rest of Germany. He never wanted to sue Rheinmetall for damages, not even in cooperation with the British occupation forces.” Hartmut explains: “My father never had to fight on the front line. Thanks to the dispossession, he was given the status of a person who was needed at home in the interest of the public. All his comrades who had attended the same basic military training had died on the Eastern Front. My father survived – due to the dispossession. This is something he never forgot.”

The second firing range no longer exists and the farms of the family Johannes have long since been returned to their rightful owners. The memory of the dispossession has, however, remained alive. The two sons emphasise they bear no grudge against Rheinmetall. In fact, Heinrich Johannes' younger brother Alfred worked for Rheinmetall for 37 years. cl

## “Mouse” tank glides through hall

A 1941 news reel featured something quite extraordinary: it showed super-heavy tanks for the German Army attached to chains floating from one position to the next in a factory hall. What onlookers didn't know and weren't allowed to know was that the

factory was Altmärkische Kettenwerke (Alkett) in Berlin, a subsidiary of Rheinmetall-Borsig AG. Hitler's megalomania was boundless, as evidenced by the architectural plans

of Albert Speer. He also wanted the biggest ever weapon system to be built. The self-propelled mortar Karl (“Karl-Device”) built by Rheinmetall-Borsig was just one further example of his megalomania. Similar to Krupp's super-heavy howitzer Big Bertha (Dicke Bertha) from World War I, Karl fired 40mm rounds against the fortress at Sevastopol in Crimea. Another major project was the “Mouse” super tank also referred to as the “Little Mouse” by some. This tank was neither very small, nor agile or quick, nor was it detected late or did it offer other conceivable advantages. Quite the opposite: it was to be the heaviest enclosed armoured vehicle ever to be seen by the enemy. Originally designed by Porsche and called “Mammoth” (Mamuth), it was renamed “Mouse” because the name was considered more appropriate. The tank was more than ten meters long, approximately 3.7 meters wide and 3.8 meters high. Weighing in at 188 tons (compared to the Leopard 2 A6 MBT that weighs 62 tons), the tank was powered by a 1080 hp engine. In service, the tank consumed 3,800 liters of diesel over a distance of 100 kilometers. Today, a trip would cost around 5,000 €. In view of the fuel scarcity in the war, it would have been impossible to operate a complete fleet of tanks. As with the “Karl” mortar system, it would have been necessary to transport the tank to the front by train, however, the tank was too heavy to cross bridges, and many of the tunnels were too low and narrow. The German Army ordered 150 super-heavy “Mouse” tanks. A total of seven units were started, two prototypes were completed, the first of which on Christmas Eve in 1943; the remaining order was cancelled in 1944. The “Mouse” super tank was never sent to the front and actually never progressed beyond the trial phase. One prototype still exists because the Soviets seized the remaining Alkett prototype; the vehicle hull is on display at the Kubinka tank museum near Moscow. cl





Electric cranes from Rheinmetall

# Optimized efficiency

The view from Heidelberg Castle onto the River Neckar is world famous. Whereas the natural part of the river is largely used by sports and tourist boats, the channelled section of the Neckar is used by freight vessels. To load and unload, they often approach the sluice at Wiblingen which saw a buzz of activity in the 1950s.

Rheinmetall AG wanted to be involved in the transshipment of coal, coke, gravel, sand, gypsum and general cargo. After World War II, Düsseldorf announced its intention to focus on civil activities to utilise its capacities: a project whose profitability was – to say the least – doubtful. Yet the executive board remained adamant and established the department “T/V (transport and loading facilities) and mobile cranes”.

In November 1951, an order was won for a 5 ton electric crane with loading bridge for the inland port in Heidelberg. The customer was the municipal public utility company that had formerly unloaded coal for its own gas and remote heating plant in the harbour. The potential of the cargo handling site was soon apparent, so that related activities were expanded. The powerful crane system from Rheinmetall needed for this purpose was set to work in December 1952.

Rheinmetall reaped a lot of praise from the south-west of the country. The 1952 annual report of the Heidelberg municipal public utility company noted that “thanks to the new loading bridge, it is now possible to use the existing premises much more efficiently for inter-

mediate storage and carry out parallel cargo handling operations without serious loss of time”. In conclusion, it was stated that the loading bridge had proven to be particularly successful from a technical and commercial standpoint. The return on investment had thus been ensured.

Unfortunately, this positive assessment did not hold true for the crane construction business in Düsseldorf. Rheinmetall AG therefore decided to close down its loss-bringing department T/V and mobile cranes in spite of the excellent customer satisfaction. The crane-builders may have been consoled by the fact that far more ships were able to leave the port fully loaded thanks to their system in Heidelberg... **uv**



Arms manufacture

# To be or not to be?

Between 1945 and 1956, West Germany showed an astonishing change of heart with regard to arms manufacture: on December 16th, 1949, all factions of the German Parliament had unanimously voted against any defence contribution by West Germany: only three years later in February 1952, during the Cold War era that also saw the start of the Korean War, the same parliament voted in favour of a defence contribution. Rheinmetall-Borsig AG had long since taken the view that it should be involved in rearmament – which is also why the Düsseldorf site had been kept artificially alive. Yet the subject was still quite taboo in the general public. The CEO at that time, Dr. Werner Köttgen, used every opportunity to proclaim that Rheinmetall would concentrate on civil markets. There were three good reasons for this ambivalent behaviour: Firstly, Rheinmetall was co-owned by the German state. Furthermore, the finance secretary Fritz Schäffer had stated clearly that Bonn (the German capital at that time) would not be willing to invest in arms production and would purchase weapons from abroad to arm its forces. Secondly, the government was negotiating the sale of Rheinmetall-Borsig AG with several interested parties and these negotiations were not to be disturbed by discussions about arms manufacture. Thirdly, Rheinmetall-Borsig still had the plant in Berlin-Tegel. Any statement that might indicate that arms manufacture could take place in Berlin (strictly forbidden by the Allies) would be perfect fodder for the East German media. In 1956, the Röchling group acquired Rheinmetall; the Borsig plant was sold off to the Salzgitter Group practically at the same time. After that, Rheinmetall as a privatised company was able to commence manufacture for the German armed forces and NATO allies unhindered. **lb**



**1946**  
The victorious allies USA, Soviet Union, Great Britain and France create a post-war order for the world

Winston Churchill warns about the Soviet power in Europe and speaks of the Iron Curtain

1946

The disassembly order is issued for the Rheinmetall-Borsig plants and this is partly applied until 1949

Alfred Pierburg set up carburettor production in the company Robert Kahrmann Nettetel-Lobberich

**1947**  
US Secretary of State George C. Marshall announces the basic principles of the Marshall Plan for the recovery of Europe



1947

Alfred Pierburg re-establishes Deutsche Vergaser Gesellschaft in Neuss



**1948**  
Mahatma Gandhi is assassinated on 30th January

1948

Blockade of West Berlin by the Soviet Union; the Western Allies introduce the Berlin Airlift initiative.

Maschinenbau Kiel AG (MaK) is established for the production of locomotives and engines

**1949**  
NATO is founded on 4th April

Konrad Adenauer is elected the first Chancellor of the Federal Republic of Germany



1949

Mao Zedong proclaims the People's Republic of China and introduces a communist state

In Trittau, Hanns-Jürgen Diederichs sets up his own pyrotechnics business

**1950**  
Rheinmetall Düsseldorf launches production of transport and conveyance systems

1950

Kolbenschmidt in Neckarsulm casts the first cylinder heads for Porsche

**1951**  
Carl Djerassi, Gregory Pincus and John Rock develop the first contraceptive pill

Rheinmetall commences production of office machines in Düsseldorf

1951

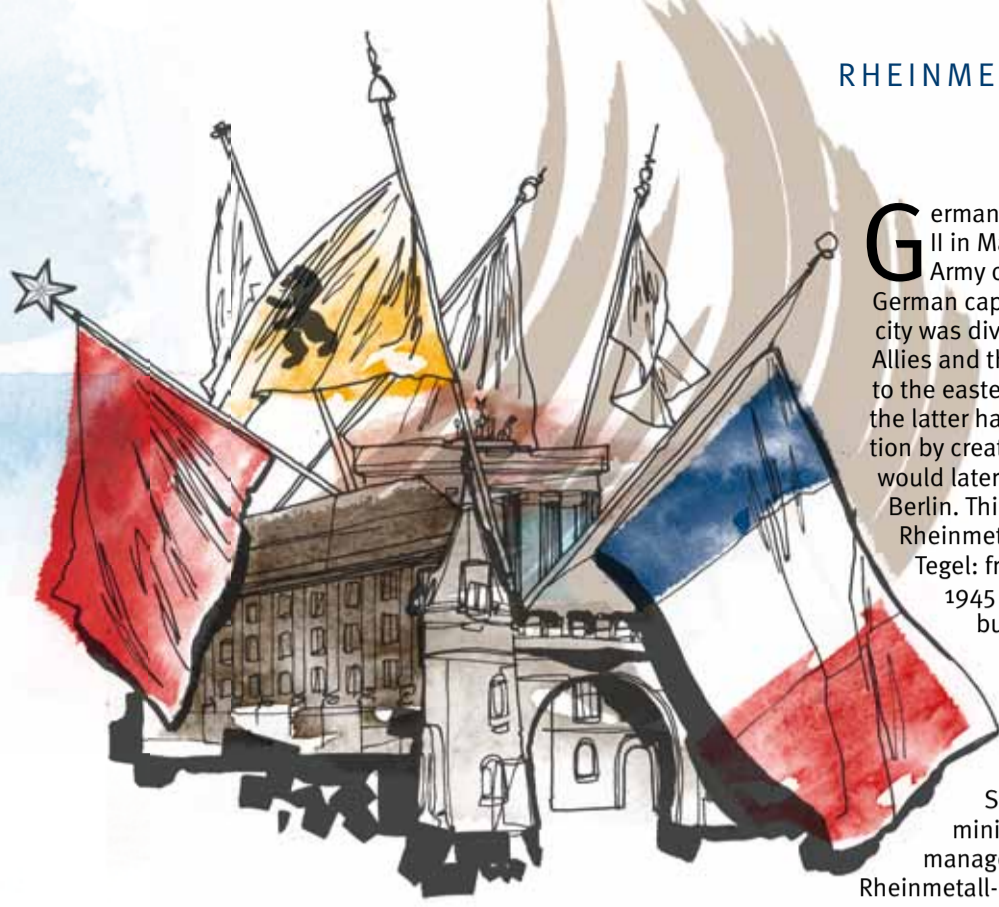
Atlas Werke in Bremen start producing the first radar units





# llas in Unterlüß

1859 saw the beginning of an oil rush on the Lüneburg Heath – “Black Gold” had been discovered while searching for lignite in Wietze, some 20 kilometers to the west of Celle. Large oil reserves were also thought to exist under the Rheinmetall proving grounds in Unterlüß. First exploration drillings conducted in 1922 were, however, unsuccessful. Yet since Rheinmetall had been forbidden to use the grounds after the end of World War II, there was once more a desire to drill for oil there in 1952. As the government itself was no longer interested in the military utilisation of the proving grounds, approval was initially granted. However, things changed with the foundation of the German Bundeswehr – Unterlüß was not transformed into a mini-Dallas and the southern part of the Lüneburg Heath did not develop into a second Texas: in 1963, drilling was ceased due to insufficient oil production. cl



Germany had lost World War II in May 1945 and the Red Army occupied Berlin, the German capital. Even before the city was divided up among the Allies and the Soviets withdrew to the eastern parts of Berlin, the latter had taken swift action by creating facts for what would later be declared West Berlin. This also affected the Rheinmetall-Borsig plant in Tegel: from the summer of 1945 onwards the few buildings and machines that were still in a serviceable condition became a bone of contention between the Soviet military administration, the interim management board of Rheinmetall-Borsig now located

## Allied wrangling

in the eastern part of the city, the French military government, the mayor's office in Tegel, the magistrate of the city of Berlin and the trustees of the western assets of Rheinmetall-Borsig – and all this wrangling took place against the backdrop of a hopelessly destroyed city. In hindsight, it is hard to grasp the chaos surrounding the plant in Tegel. Basically, the Allies all wanted the remaining assets for themselves. Initially, the mayor's office in Tegel and after its establishment, the magistrate of Berlin tried to requisition the Tegel plant as the city repair workshop (inter alia, for the repair of the transport network). This was countered by compensation claims of the Soviets, followed by the French after June 30th, 1945. To begin with, the French agreed to use the Tegel plant as a maintenance site in Berlin. But when it became clear that most of the work orders came from the Soviet Occupation Zone, they withdrew their consent. The plant was occupied by the military in 1947 – as had previously been the case with the Soviet Army – disassembly was initiated but not actually carried out. Apparently the French wanted to tap the know-how of specialist workers in Tegel and unsuccessfully tried to persuade them to move to France. In the end, the French let the Berlin machinery construction contractor Schwartzkopff – who was carrying out repair work for the city magistrate – have the site. Order was not restored until the Petersberg Agreement had been concluded on November 22nd, 1949: disassembly was stopped and the Tegel plant was granted permission to operate. With its traditional machinery products that had been the pride of the former Borsig company along with locomotive production, workers at Tegel were finally able to contribute to the reconstruction of the city of Berlin. lb

“Give us our factory back!”

Many listeners tuned in to their radios on the evening of August 24th, 1949, will have been surprised by what they heard. Arnold von Borsig, from a well-known industrialist family, claimed on RIAS broadcast station that the Borsig family had practically been dispossessed by the German Reich and Rheinmetall in 1993 when Rheinmetall took possession of the plant in Berlin-Tegel. With the aid of the French military government and the Berlin magistrate, Borsig intended to bring legal action against Rheinmetall. Nothing ever came of it because both the city of Berlin and the French were really only looking after their own interests.

Yet what gave Arnold von Borsig the idea in the first place? In 1930, the traditional locomotive manufacturer Borsig went bankrupt in the wake of the Great Depression. Even the sale of the locomotive division wouldn't have prevented bankruptcy. The creditor banks now had the say in Tegel. The Borsig family had previously tried to sell the company to a Dutch financial consortium which nearly succeeded had it not been for the new National Socialist ruling power that had already decided to allocate the factory premises to the arms industry. One of the interested parties willing to invest in Tegel was Rheinmetall. The German government put pressure on the executive board, making its involvement in the rearmament of the Reich conditional on manufacture in Berlin. Irrespective of this, the sale of the business to whosoever and at whatever price would hardly have helped the Borsig family since the creditors stood to benefit from a sale. After 1945, the family tried to nullify the contracts of 1933 for being in violation of moral principles. This failed since many of the events could no longer be traced following the turmoil of war. Arnold von Borsig didn't give up and turned to the general public. In 1950, an amicable settlement was found with Rheinmetall. Although his prospect of success at court was slim, Rheinmetall paid 150,000 DM in order to get rid of the troublemaker. cl

1952

1952

6th February: Coronation of Elizabeth II as queen and head of state of the United Kingdom and Commonwealth of Nations

1952



Edmund Hillary and Tenzing Norgay are the first to climb Mount Everest (8848 m)



1953

Josef Stalin dies; his successor is Nikita Khrushchev

On 17th June, popular uprising in the German Democratic Republic

Oerlikon opens a test center for arms and munitions in Ochsenboden

1954

Theodor Heuss is elected the first president of the Federal Republic of Germany

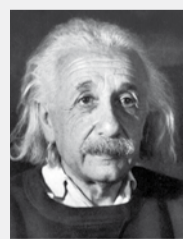
The rearmament of the Federal Republic of Germany and its inclusion in NATO is agreed in the Paris Agreements

1954

The “Miracle of Bern”: for the first time in history, a German football team wins the World Cup Final

Ernest Hemingway wins the Nobel Prize for Literature

A large part of non-military production at Rheinmetall in Düsseldorf is shut down due to non-profitability



1955

The German Bundeswehr is established

Death of Albert Einstein, physicist who developed the theory of relativity, and of Thomas Mann, German writer and Nobel Prize winner

1955

Rheinmetall acquires license rights to manufacture the MG42



Kolbenschmidt acquires a license for aluminium low-pressure casting process

Destalinization and foreign policy of peaceful coexistence under Nikita Khrushchev in the Soviet Union

Violent repression of the Poznań Uprising and Hungarian Uprising by the Soviets

The Röchling family acquires a majority stake in Rheinmetall-Borsig AG

1956

Death of the German writer Berthold Brecht



1956

After the sale of Borsig to the Salzgitter group, Rheinmetall-Borsig AG is renamed as Rheinmetall AG.

The first Solex Register carburetors are manufactured by Pierburg in large series



# Weird crackers

On a Carnival Monday in the 1930s, a Rheinmetall cannon shot sweets into the air. The firing device had been built for the Düsseldorf Carnival Corps. The order presented quite a challenge since the cannon was supposed to produce a bang without causing the sweets to taste of gunpowder. Besides, fired sweets were not to injure any of the Carnival revellers. In the end, the cannon exceeded all expectations which is hardly surprising as Professor Dr. e. h. Carl Waninger – a leading naval systems designer of the 1920s and 1930s at Rheinmetall – had participated in the development. In his memoirs aptly entitled Knallbonbons (meaning crackers), the man who was later to become managing director of defence activities at Rheinmetall GmbH recalled this astonishing event. Subtitled “Die merkwürdigen Kanonaden eines alten Konstrukteurs” (“the weird cannonade of an old designer”), the 249 page book mainly written in the third person gives many interesting details about patented designs of the bearded professor. His staff often referred to him as the “cannon Christ” due to his head of hair, something Carl Waninger thought worthy of mention – and not without reason. **uv**

Antitrust dispute relating to WMF AG

# No-Go for Rheinmetall

The German national press had some unusual news in February 1981. Unexpectedly, the German Antitrust Authorities had rejected the acquisition of the traditional WMF company by the Rheinmetall group. Why did Rheinmetall want to buy WMF? For many years, the defence-oriented company had been trying to purchase a profitable and strong civil business. But most of the related engineering company shareholdings were highly unprofitable. The acquisition of WMF – the former major shareholder was loosely related to the Röchling family which was the majority shareholder of Rheinmetall – was to bring a change of fortune. Until the “No” came from Berlin. In the following weeks, months and years, Rheinmetall lawyers tried hard to convince the Antitrust Authorities that Rheinmetall and WMF would not be operating in the same market sectors – normally this was the

reason for a formal prohibition order. Indeed, what Rheinmetall CEO Dr. Hans-Ludwig Hockel claimed in front of the press sounded quite absurd: nobody could honestly assume that tank weapons and cutlery or pots and pans would attract the same customers. But the Antitrust Authority had its reasons for turning down the request: WMF already held a strong position on the technical consumer goods market and the financial strength of Röchling was likely to reinforce this position. The proceedings lasted four years – ultimately leading to an application for ministerial approval. In a preliminary informal meeting at the ministry, the Rheinmetall executive board was then persuaded to dispense with the formal application. And when a strong investor suddenly appeared from nowhere, Rheinmetall gave up the WMF project in 1985 and invested in Pierburg ... but that is another story. **lb**



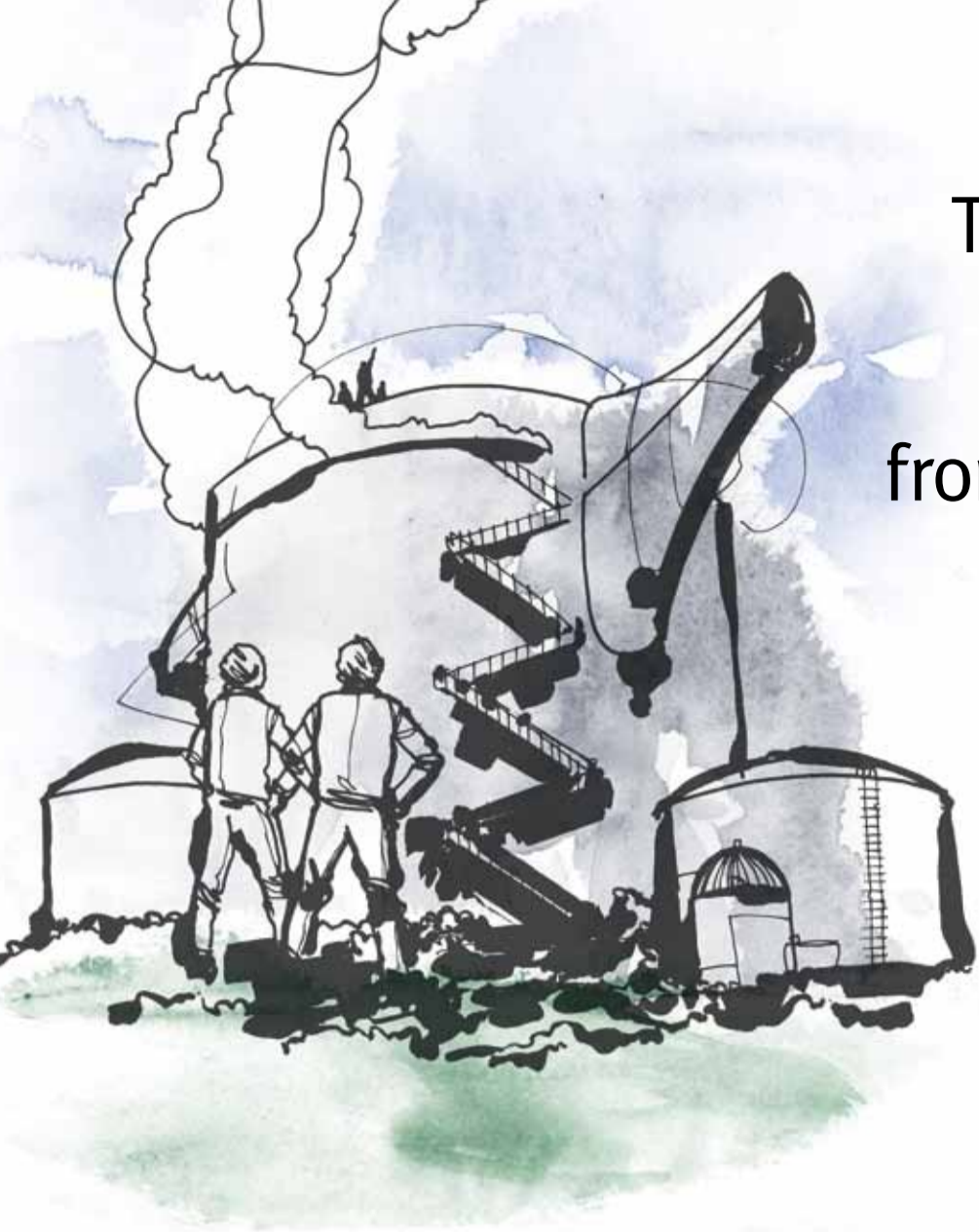
At long last:

# Making the mark at 125

A book was to be written to celebrate Rheinmetall’s centenary – a book that was to consist of seven volumes: one volume for the company history and another six describing the history of weapons technology. In the end, the executive board called off the project in 1985 because it was too expensive. Another attempt was made in 1987. This time, the tome was to consist of one volume only, written by a military historian. He duly set about the task of studying the relevant documents and literature, and before even delivering his first interim report, handed in the first bill; this was followed by complete silence until Rheinmetall sent him birthday wishes in February 1989, the year of the centenary, and asked for the results of his work. These came in form of 111 pages, describing Rheinmetall’s history up to the Third Reich. More was never received. Dr. Brauner, the chairman of the executive board at that time, thus had no choice but to inform guests invited to the centenary celebrations that the group had deliberately chosen not to have a special centenary publication written! The centenary book had simply disappeared... **cl**



1957	Rheinmetall starts production in Düsseldorf of the MG 42 and 20mm cannon for the German Bundeswehr	
1959	January 1: The revolutionaries under Fidel Castro come to power in Cuba	
1960	Kolbenschmidt builds a modern aluminium smelting plant in Neckarsulm	
1961	August 13: Construction of the Berlin Wall gets under way	
1961	April 12: Yuri Gagarin is the first human to fly into outer space onboard the Vostok 1 spacecraft	
1962	Rheinmetall's first diversification into the packaging business with the acquisition of Benz & Hilgers	
1963	November 22: Assassination of US President John F. Kennedy in Dallas. Lyndon B. Johnson becomes the 36th President of the USA	
1963	Kolbenschmidt commences plain bearing production at St. Leon-Rot	
1964	Martin Luther King is awarded the Nobel Peace Prize	
1964	Manufacture of multiple-base propellant powder launched at Nitrochemie	
1965	The first Leopard 1 main battle tank manufactured by Krauss-Maffei and MaK in Kiel is handed over to the German Bundeswehr	
1969	July 21: At 3:56 CET, Neil Armstrong is the first human being to step onto the lunar service after the Apollo 11 moon landing	
1969	Kolbenschmidt acquires the plain bearing plant from Höveler & Dieckhaus in Papenburg	
1970	December 7: German Chancellor Willi Brandt kneels down in front of the memorial for victims of the Warsaw Ghetto	
1971	The first Marder infantry fighting vehicle manufactured by Henschel in Kassel is handed over to the German Bundeswehr	
1972	“Black September” during the Munich Olympic Games when Palestinian terrorists take members of the Israeli team hostage	
1973	A wildcat strike is initiated at Pierburg; this ultimately leads to the abolishment of the low-income group	
1974	July 7: The German football team wins the World Cup Final against the Netherlands in Germany	



# The “fast breeder” from Geislingen

Rheinmetall was not only known for its automatic firearms but also for rapid cooking – thanks to the revolutionary WMF Super 3 pressure cooker developed by Württembergische Metallwarenfabrik, aka WMF. Between 1980 and 1985, the well-known company belonged to Rheinmetall Berlin AG.

Researchers from the WMF headquarters in Geislingen an der Steige had succeeded in fitting a third cooking stage. Similar to the “fast breeder” nuclear reactor, this turbo cooker was designed to produce fuel – of the edible type in this case.

WMF launched the biggest advertising campaign ever for a pressure cooker to spread the news about the shorter cooking times. Buyers didn’t hesitate and soon made the “fast breeder” from Geislingen the season’s top selling product. The Super 3 has long since become a cult object and spares for the cooker are in high demand on Ebay. **uv**

From the radio telescope in Eschweiler to the comet Churyumov-Gerasimenko

# Rheinmetall in space

The reason for Rheinmetall’s first space launcher that lifted off from the Kourou given on page 15 of this special Newsline bers of the Rheinmetall group had already ac-research even before then – for instance, the ny Aviatest GmbH. On the initiative of the phys-North Rhine-Westphalia Professor Leo Brandt, the Rheinmetall Supervisory Board, Aviatest was to participate in European space projects. Unfortunately, the Eldo A Launcher developed in Trauen, Lower Saxony, for which Aviatest had built the test rigs never made it into space.

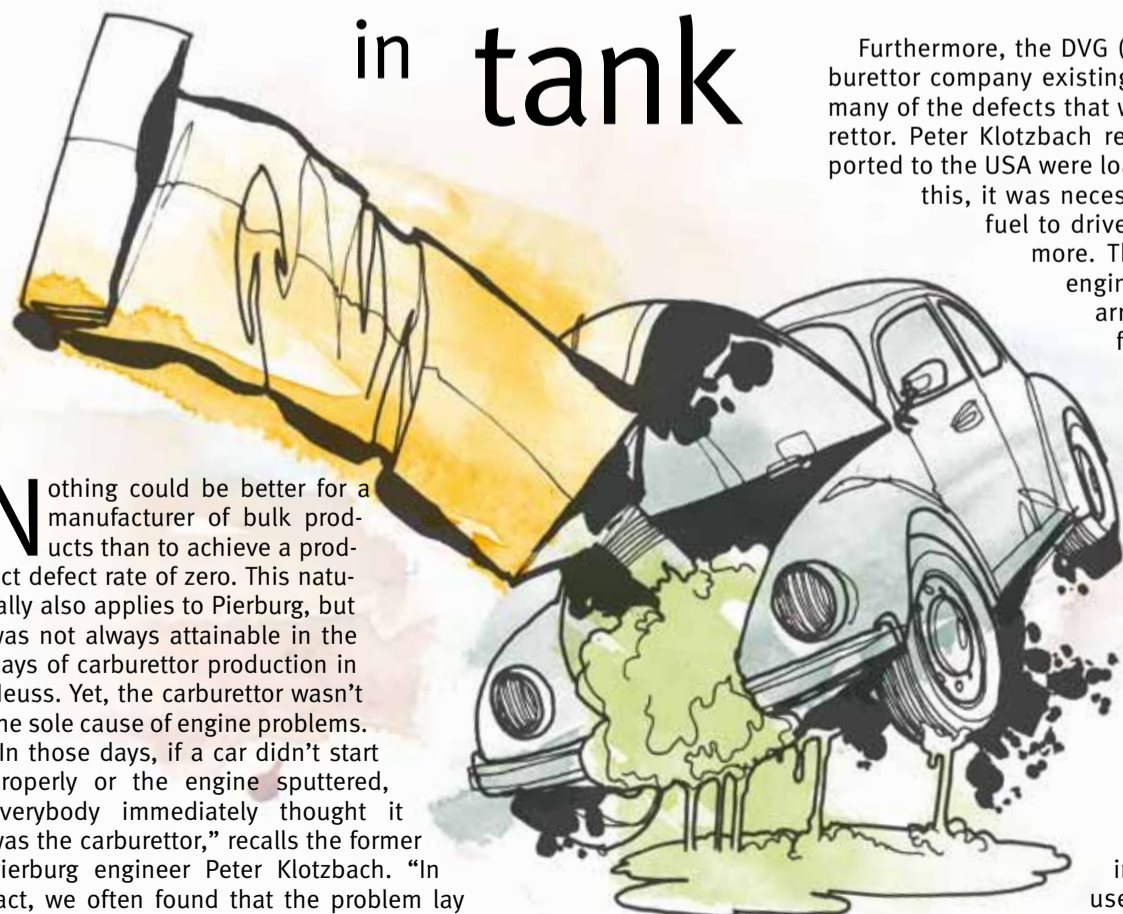
Alkett, a Rheinmetall subsidiary in Berlin, had already made it possible to observe and study the skies as early as 1956. Alkett delivered the two drives for the telescope mirror of the radio telescope located near Bad Münstereifel on the edge of the Eifel: the azimuth drive for horizontal rotation and the elevation drive for vertical rotation of the mirror. “Both drives are still fully functional today”, says Dr. Wolfgang Herrmann; the retired physicist readjusts the mirror daily. In fact, the radio telescope in Eschweiler is today a museum of technology belonging to the trust of North Rhine-Westphalia from where burnt-out, collapsed suns, so-called pulsars whose radio emissions can be received on earth, can be observed. **lb**

venture with the Ariane 5 spaceport in March 2004 is edition. Actually, mem-tively taken part in space Düsseldorf-based compa-icist and undersecretary of who was also a member of

# Glue in tank

Furthermore, the DVG (Deutsche Vergaser Gesellschaft) carburettor company existing at the time was not responsible for many of the defects that were clearly attributable to the carburettor. Peter Klotzbach remembers that many VW Beetles exported to the USA were loaded onto ships in Bremerhaven. “For this, it was necessary to fill the cars with just enough fuel to drive them onto and off the ship and not more. This frequently meant that the Beetle engines wouldn’t start when the ship finally arrived at its destination in America. In fact, once none of the VW Beetle engines could be started on arrival in the USA. Who took the blame? The carburettor, of course, in other words us at Pierburg! The carburettors were examined and it was found that the float needle valves were completely glued up. “Stuck” or “glued up” needle valves were sometimes attributable to a carburettor production fault, but this time the problem was caused by something quite different: residues of glue were found and it transpired that Pierburg was not to blame for the problem. The tank truck that had refuelled the VW Beetles in Bremerhaven had previously been used to transport glue – and hadn’t been rinsed properly. This meant the Beetles had not only been filled with fuel but also with Pattex glue. **lb**

Nothing could be better for a manufacturer of bulk products than to achieve a product defect rate of zero. This naturally also applies to Pierburg, but was not always attainable in the days of carburettor production in Neuss. Yet, the carburettor wasn’t the sole cause of engine problems. “In those days, if a car didn’t start properly or the engine sputtered, everybody immediately thought it was the carburettor,” recalls the former Pierburg engineer Peter Klotzbach. “In fact, we often found that the problem lay elsewhere. Sometimes, the car manufacturers themselves had caused the problem. Still, the immediate reaction was to blame the carburettor.”



1975	1975 Contraves GmbH in Stockach – today operating under the name of Rheinmetall Soldier GmbH – is established	
1976	1976 Apple is founded by Steve Jobs and Steve Wozniak	1976 Pierburg acquires the first shares in the Spanish company Carbureibar S.A. in Spain, today known as Pierburg SA. On Abadiano
1977	1977 October 13 – 17: the Lands-hut aircraft is hijacked and flown to Mogadishu where it is freed by German GSG9 special forces	
1978	1978 Kolbenschmidt starts piston production at the US plant Marinette	
1979	1979 Rheinmetall commences series production of the 120 mm smooth-bore cannon for the Leopard 2	
1980	1980 Atlas Elektronik in Bremen develops the first training simulator for the Leopard 2 main battle tank	
1981	1981 August 12: the US company IBM presents the IBM 5150, the first personal computer (PC)	
1982	1982 MaK in Kiel receives the development order for the Keiler mine-clearing tank	
1983	1983 Series-production of an electronic carburettor gets under way at Pierburg	
1984	1984 Kolbenschmidt AG is floated on the stock exchange	
1985	1985 July 7: Aged 17, Boris Becker is the first German and also the youngest tennis player ever to win the Wimbledon Lawn Tennis Championship	
1986	1986 Rheinmetall buys Pierburg GmbH in Neuss and creates its Automotive division	
1987	1987 Rheinmetall builds a hall for electromagnetic compatibility (EMC hall) testing in Unterlüß	
1988	1988 Rheinmetall and Mauser Oberndorf develop the double calibre cannon MK 35/50 mm Rh 503	
1989	1989 November 9: Fall of the Berlin Wall and opening of the border between East and West Germany	1989 Kolbenschmidt acquires the pistons business of Société Mosellane de Pistons (SMM) in Basse-Ham near Thionville in France

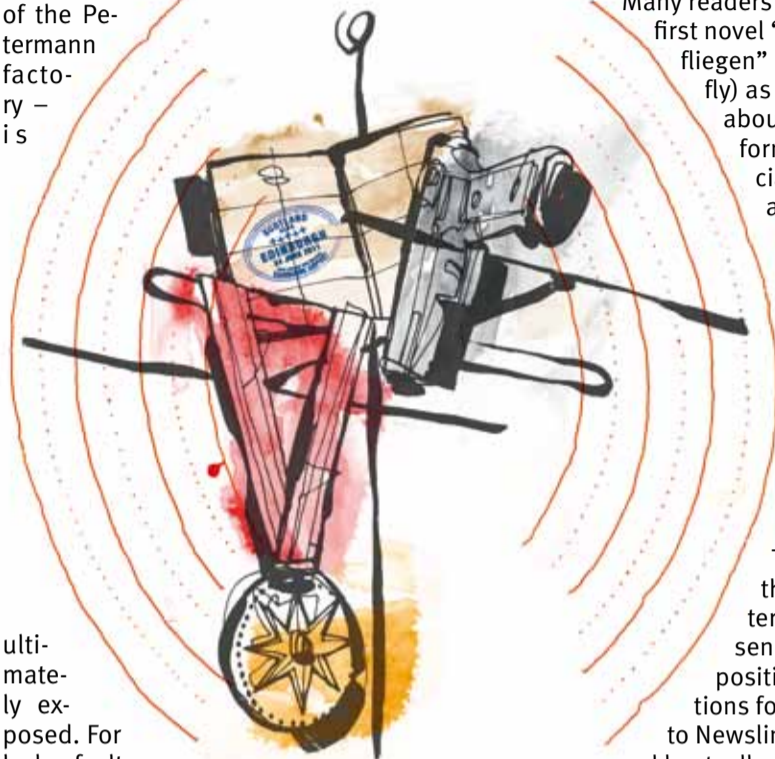
The story goes like this: the communications technology company Richard Hirschmann GmbH & Co. KG in Neckartenzlingen near Nürtingen is in financial difficulty. A new management is brought in to restructure the company and prepare it for sale. These are the basic facts behind the novel entitled "Nur Vögel können fliegen" (Only birds can fly). In reality, the sale of Hirschmann was a success: in fact, the electronics specialist was bought by the Rheinmetall group in 1997. Dr. Lothar Ulsamer, the former press officer of Hirschmann, has used elements of his professional and personal life in his thriller. The book is the first of several regional crime novels.

It is not by chance that the two protagonists of the story Markus Petermann and Roy Lester are based on the characters of the former Hirschmann managing director Richard G. Hirschmann and the press officer Dr. Lothar Ulsamer. The story reads well and it is soon clear that Ulsamer is an experienced writer, although the plot is somewhat strange. The build-up of tension is intentional: the entrepreneur couple Petermann is to be got rid of, a plot that is masterminded by a psycho sect and a drug cartel that intend to take control of the business. The two new managing directors Jablonsky and Meierle are reckless villains who operate a tough regime to restructure the company and happily fire loyal staff without reason.

The attempted murder of Mrs Petermann, the wife of the former managing director, with a delivery van takes place against this backdrop. To find out who is behind the attack, Lester persuades the Petermans to hide in the Scottish Highlands. The ex press officer Lester likewise wants to get himself and his family out of the way. So he packs up, takes his wife and children and drives all the way to the coastal town of Loch Eriboll in the north of Scotland. As expected,

actions. Nonetheless, Jablonsky – the grand master of the solar sect and one of the new managing directors of the Petermann factory – is

ultimately exposed. For lack of alternatives, Jablon-



Ex-Hirschmann press officer writes regional crime novels

## Villains, rams and craggy rocks

the holiday doesn't go smoothly: the villains pursuing Petermann are hard on his heels. If only Petermann hadn't rung his sister on her birthday and told her his whereabouts.

The drama and tension rise: having met up at the Golf Hotel, the Petermanns and Lester are still not safe from the villainous members of the sect in Scotland. In spite of Lester's contacts with the local police, their place of hiding is soon found out. This time, the criminals try to kill Petermann. Fortunately, Lester just manages to save Petermann by telling his former boss and friend to hide in a sand bunker. The exciting story continues as the Petermanns pack up and move to a holiday home in the vicinity.

The chase continues: Lester outwits the villains and escapes in a fishing boat. In spite of various hints, the hero still doesn't know who is masterminding the

sky commits suicide and the second managing director Meierle escapes. All is well that ends well: the sale of the Petermann company goes through, supported by Petermann and Lester. Petermann assumes a representative role in the company and his press officer remains loyal to him.

Criminal novels with a regional flavour are all the rage in Germany. Ulsamer who studied social sciences in Tübingen and Würzburg has chosen to follow suit. He deliberately picks Esslingen by the River Neckar (his former place of work, renamed as Kelterburg in the novel) as the location for the first part of the book – although Hirschmann had actually moved from there to Neckartenzlingen, many of the staff were still living there. The Scottish Highlands with their hills and craggy rocks offered the perfect scenery for villains, rams and gunslingers. **ann**

## A lively imagination

Dr. Lothar W. Ulsamer has made quite a name for himself as a writer of thrillers in his home town of Esslingen near Stuttgart. Many readers interpreted his first novel "Nur Vögel können fliegen" (Only birds can fly) as a disclosure story about events at the former electronics specialist Hirschmann; after all, Ulsamer had for many years worked as press officer for Hirschmann – a member of the Rheinmetall group between 1997 and 2000 – and partly based the novel on his own experiences. The 61 year-old father of three daughters who has held senior management positions in communications for many years spoke to Newsline about the regional bestseller published in 1997.

**Newsline:** Why did you decide to start writing crime novels alongside your job in the industry?

**Ulsamer:** In the early nineties, rumours about Hirschmann and its financial difficulties were rife in Esslingen. As the press officer of Hirschmann at the time, I was a first hand witness to the evil machinations of the dubious management board that had taken over. I came to write the novel because I felt a need to inform the local population – and especially the workforce of Hirschmann – and to overcome my personal frustration.

**Newsline:** How was the book received by its readers?

**Ulsamer:** The response was very good considering I was a relatively unknown writer. I sold around 7,000 copies.

**Newsline:** Did you enjoy writing the book?

**Ulsamer:** Oh yes, immensely. Unlike in my real-life job, I was able to let my imagination run wild and allow my characters to develop without actually knowing how the book would end when I started.

**Newsline:** Why did you choose Stuttgart and Scotland as the two main settings for your story?

**Ulsamer:** The two places offer a fantastic contrast: on the one hand, there is the densely populated region around the River Neckar in Germany and then the superb scenery in Scotland that offers a perfect setting for chasing villains. **ann**

## The end of a tradition

Rheinmetall and Düsseldorf – the two were closely connected for over a hundred years. Heinrich Ehrhardt had acquired the agricultural land from the widow Scheuten in 1889 and built a production building on it where around 1,500 people then manufactured cartridges for the infantry rifle of the German Reich. When World War I broke out 25 years later, the workforce had risen to around 8,000 people, mainly engaged in the manufacture of cannons. The factory at Düsseldorf-Derendorf grew to an appreciable size, extending as far as the area now accommodating the wholesale market. The company was downsized significantly after 1945 – and even shut down for a while. The creation of the German Bundeswehr injected new life into the plant and for 35 years Rheinmetall manufactured products for the Bundeswehr and NATO allies: for example, the MG 42, the Mk 20 Rh 202 twin-gun anti-aircraft system and the 120 mm smooth-bore gun. However, the fall of the Berlin Wall signalled the end of the site. Rheinmetall was once more forced to downsize. While the administration moved to a new facility in Ratingen, development and production were moved to Unterlüß in Lower Saxony. A long tradition in Düsseldorf had come to an end after 103 years. **lb**



1990	The Berlin Wall is finally demolished	1990	Rheinmetall buys Kieler Panzerbaugesellschaft MaK, the present-day Rheinmetall Landsysteme GmbH, from Krupp
	Iraqi troops invade Kuwait (Second Gulf War)		
	German reunification		
1991	KS Gleitlager establishes its first production site on the US continent	1991	Ceasefire with Iraq ends the Second Gulf War
			German parliament decides to move from Bonn to Berlin
			Mikhail Gorbachev steps down as President of the Soviet Union
			
			The Soviet Union officially ceases to exist
1992	The Maastricht Treaty on the European Union is signed	1992	Rheinmetall gives up its traditional company premises in Düsseldorf
	Galileo Galilei is formally rehabilitated by the Roman Catholic Church		
			
1993	Rheinmetall commences disassembly of East German ammunition in Weichensdorf	1993	Dissolution of Czechoslovakia, creation of the Czech Republic and Slovakia
			Five Turkish women and a girl die as a result of a Neo-Nazi arson attack in Solingen
			Yitzhak Rabin and Yasser Arafat sign the agreement granting Palestinians extensive autonomy in the occupied territory
			
1994	Nelson Mandela elected as the first black president of South Africa	1994	MaK presents the air-transportable armoured fighting vehicle Wiesel 2
	Michael Schumacher is the first German Formula 1 World Champion		
			
1995	Pierburg presents the first magnesium intake manifold	1995	Steve Fossett is the first man to cross the Pacific Ocean in a balloon
			The Israeli prime minister Yitzhak Rabin is assassinated in Tel Aviv
			Dayton Peace Agreement on Bosnia-Herzegovina
			Christo and Jeanne-Claude wrap the German Reichstag building in Berlin
			

# Why not call Rheinmetall Jagenberg?

1989 – the year of Rheinmetall's centenary. But which Rheinmetall was actually meant? Opinions differed at the time. Ever since 1956 the group had tried to establish a second equally strong civil sector alongside the military business. This really only succeeded with the acquisition of Jagenberg Werke in 1981 and Pierburg GmbH in 1986. Rheinmetall GmbH, at that time the name of the company responsible for defence activities, quite understandably thought it best represented the tradition of the Rheinmetall group.

Dr. Hans U. Brauner, CEO of Rheinmetall Berlin AG at the time, who held close ties with the civil business units, had a different point of view which was hardly surprising as he was also the CEO of Jagenberg AG. Consequently, Brauner was keen to transform the

engineering business into the key division of the group. By renaming Rheinmetall Berlin AG as Jagenberg AG, Brauner hoped to strengthen the focus on civil activities and raise the general awareness of Rheinmetall as a group

that was not only engaged in the defence market.

This concept never materialised. The defence sector protested, believing the identity of the entire group was at stake. People at Jagenberg were likewise not in favour of the idea of conducting defence activities under the name of Jagenberg. And Pierburg similarly feared it would lose its identity, all the more so as it had already lost the trademark "Solex" with the disappearance of the carburettor.

In the end, it all came to nothing and Rheinmetall was allowed to keep its name – up to this very day. **lb**

In the early 1990s, the company First Automobile Works (FAW) from the People's Republic of China acquired a part of the carburettor production from Pierburg in Nettetal, a small town located on the banks of the River Rhine, not far from the Dutch border. The Nettetal production lines for large carburettor series were no longer needed for the domestic market since tighter EU emission regulations for cars with gasoline engines meant the carburettor technology had to be replaced by catalytic converters. To prepare for the handover of the systems to FAW, the largest automaker in the People's Republic of China at that time, around 65 Chinese employees came to Nettetal for a two month training that was carried out in several stages. Harald Fredrich, plant manager of Nettetal at the time, recalls the times with amusement.

the product in China. Under a joint venture between Volkswagen AG and FAW in Changchun, North China, the carburettor was to be fitted in Audi 100, VW Golf and VW Jetta cars built under license in China. "To achieve this, the Chinese needed the complete production facilities which we were able to provide", says the former plant manager who was with Pierburg GmbH for 42 years.

In 1990, he and his predecessor Karl Evelbauer, who had originally established contact with the Chinese and prepared the sales process for the production facility, travelled to China to sign the sales contracts. "I was really impressed by the way our meals with the Chinese were celebrated. Many different dishes were placed on a revolving table. Fortunately, I managed to escape eating the pig's eyes that stared at

Chinese because they already got held up in Moscow for two days due to immigration formalities. And since not all of the workers sat in the same carriage and some of them failed to get off the train in Düsseldorf and mistakenly travelled on to Essen or Cologne, the Pierburg project team faced unexpected problems. "We had to get in touch with the German railway mission to find out how to return the "lost" travellers to their original destination. In many cases, our drivers had to rescue our Chinese guests from various places". All in all, three groups of 20 came to Germany for training. All of them were familiarised with the new task relatively quickly, recalls Fredrich.

The Chinese guests lived in a converted office building in rooms with bunk beds and showers on the Pierburg premises. They even had their own kitchen to cook



Chinese staff travel from Peking to Nettetal

## A long and winding road...

"Pierburg faced tough times in the early 1990s. It was period of major change", recalls Harald Fredrich, who was plant manager of Nettetal between 1989 and 1999 and – as such – also responsible for the carburettor business there. His tasks were certainly challenging: Not only did the 62 year-old manager have to disband carburettor production, but he was also involved in launching the manufacture of new products like electrical throttle bodies and advanced intake manifolds.

Although carburettors of the type 2E were no longer needed on the German and EU market, there was a strong demand for

me from one of the bowls", remembers the retired Pierburg employee with a smile.

Since the Chinese employees had little or no knowledge of carburettor production, it was decided to train them at the Nettetal plant and teach them how to operate the machines and apply quality assurance measures, amongst other things. Only one year later, the first 20 FAW employees travelled to Nettetal with a delegation leader and interpreter.

The ten-day journey on the Trans-Siberian railway from Peking via Moscow to Berlin and then on to Düsseldorf was a real adventure for the guests and hosts alike: for the

their own food. "Several times a week a driver took them out shopping in a VW bus, accompanied by their interpreter. A pair of wild ducks that had been seen on the meadows by the barracks disappeared a few days later – presumably they ended up in the cooking pot. After all, fried duck is a Chinese speciality", notes Fredrich.

Chinese workers from the last delegation disassembled the production line. The casting and maintenance machines as well as the assembly equipment were shipped via Antwerp to China. Around six months later, production was fully under way there... **ann**

**1996**  
Last of 210 French nuclear tests at Mururoa atoll

Jan Philipp Reemtsma is kidnapped for 32 days

The Pay TV channel DF1 starts digital television broadcasts in Germany

Germany wins the European Football Championship for the third time thanks to the golden goal by Oliver Bierhoff

Birth of the sheep Dolly, the first mammal to be cloned



**1996**  
The German Navy is equipped with the 27 mm Drakon anti-aircraft gun from Mauser Oberndorf



**1997**  
Rheinmetall buys Kolbenschmidt AG in Neckarsulm that is merged with Pierburg to form the present-day KSPG AG group

**1997**  
The Labour Party under Tony Blair wins the General Elections in the UK

End of British rule of Hong Kong and transfer of sovereignty to China

The Pathfinder space probe with the Sojourner vehicle lands on Mars



Princess Diana, the first wife of the British crown prince Charles, dies following a car accident in Paris

**1998**  
Death of Pol Pot in Cambodia

The Kyoto Protocol on Climate Protection is signed

Good Friday Agreement for Northern Ireland is signed

ICE train accident at Eschede



German-speaking countries introduce spelling reform

Google is founded in California/USA

**1998**  
The first aluminium cast series-engine block is manufactured in Neckarsulm



**1999**  
Rheinmetall Defence acquires Oerlikon Contraves AG in Switzerland, now operating under the name of Rheinmetall Air Defence AG

**1999**  
The Euro is introduced as book currency in 11 states

Impeachment proceedings instigated against US President Bill Clinton in the wake of the Monika Lewinsky affair

Columbine High School massacre in the USA

50th anniversary of the Republic of Germany

World population exceeds six billion for the first time

Vladimir Putin becomes President of Russia



**2000**  
Opening of the Expo 2000 world exhibition in Hanover

**2000**  
Last football match at Wembley Stadion



The French Concorde plane crashes in Paris



# High noon with Wyatt Earp

February 2001 – following the change at the top of the Executive Board in 2000 and the concentration on a strategy of clear lines pronounced by the new CEO Klaus Eberhardt, it seemed that things had calmed down at Rheinmetall – but this was not the case as an American called Guy Wyser-Pratt suddenly appeared on the scene, stating he had acquired around 7% of Rheinmetall stock. Wyser-Pratt claimed that by buying minority shareholdings he raised the value of companies by shaking shareholders into action and forcing managements to adopt strategies that suited his plan. In the case of Rheinmetall, he demanded the exclusive concentration on defence activities. However, his project failed. Not only had group's executive board already launched its extensive divestment program, commencing with the sale of the Jagenberg group, but CEO Eberhardt also refused to concentrate on one corporate business line only. In the end, Röchling bought Wyser-Pratt's shares in November 2001. Nonetheless, "Wyatt Earp" as he was often referred to behind closed doors, left his mark on the group, although this is difficult to prove: over the period of one year, the value of ordinary Rheinmetall shares rose by 110% and that of preference shares by around 72%. **cl**



New York, London, Seoul, San Francisco, Berlin – these capitals and many other cities in the world take pride in architectural masterpieces by the star architect Daniel Libeskind. Düsseldorf joined this elite group in October 2013: Daniel Libeskind designed the Kö-Bogen that was officially inaugurated at the northern end of the Königsallee last autumn. The distinct building complex consisting of Travertine and glass accommodates modern offices, shops and restaurants. In an area covering 15,000 m<sup>2</sup>, the fashion specialist Breuninger offers an extraordinary shopping experience including the biggest shoe shop in North-Rhine Westphalia. The Sansibar from the North Sea Island of Sylt opened its first restaurant on the mainland here.

The Düsseldorf Rheinbahn trams still pick up passengers where the new Libeskind construction stands – with the opening of the new Wehrhahn line, these will partly be underground in future. So the Jan-Willem-Platz offered space for innovation. A look at the city's history shows that the novelty isn't as new as it seems. The Kö-Bogen of the 21st century has reinvented the city's architecture of the 19th century when an arc-shaped road joined the Hofgarten gardens of Düsseldorf with the shopping avenue Königsallee. This

The link between the Kö-Bogen and entrepreneur city

## A dual approach to modernity

explains the term Kö-Bogen (Kö arc). The curved line of the Libeskind architecture reflects the combination of city and countryside with green diagonal façade sections.

While the star architect has combined the past and present of the city in his Kö-Bogen, another architectural tour de force combines life and work in a similarly interesting manner: the "Unternehmerstadt" (entrepreneur city) in the immediate vicinity of the Rheinmetall headquarters.


The buildings erected in Düsseldorf-Derendorf since 2006 constitute no less than a future model of urban life, developed by

Rheinmetall Immobilien GmbH. A modern municipal world for businesses and private use has grown on the former production site of Rheinmetall amidst existing urban structures, distinguished by outstanding architecture meeting high ecological standards. Inhabitants of the "Unternehmerstadt" welcome the extensive offer of services making their lives even better. A nice home and short distances leave more time for the really important things in life.

The "Unternehmerstadt" and Kö-Bogen – two urban developments that have taken shape in Düsseldorf. **uv**



**2001**  
The Combat Training Center operated by Rheinmetall is taken into service at Altmark




**2001**  
September 11 terrorist attacks on the World Trade Center and Pentagon in the USA (with around 3,000 victims)


German parliament approves first mission of the German armed forces outside Europe in Afghanistan

**2002**  
The Euro is introduced as the normal currency (of the European Economic and Monetary Union)

Nobel Peace Prize is awarded to Jimmy Carter



**2002**  
The first prototype of the Boxer armoured fighting vehicle is handed over to the European Defence Agency



**2003**  
Kolbenschmidt launches series production of pistons with LiteKS technology

**2003**  
Manufacture of the last VW Beetle in Pueblo/Mexico

Republican Arnold Schwarzenegger is elected Governor of California



**2004**  
Mark Zuckerberg, student at Harvard University, launches Facebook as a platform for contacts between students




The tsunami with a death toll of around 230,000 destroys coastal regions of India, Sri Lanka, Thailand, Malaysia and Indonesia



**2004**  
Nitrochemie Aschau GmbH starts its multi-year project EMPA for renewal of the systems for production of multiple-base propellant powders



**2005**  
Pierburg inaugurates its new assembly plant in Usti



**2005**  
Joseph Ratzinger is elected Pope Benedict XVI

Following the general election, Angela Merkel becomes Germany's first female Chancellor

**2006**  
FIFA World Cup in Germany; Italy wins the Championship

Saddam Hussein sentenced to death (and executed on December 30)



**2006**  
RDE is awarded the contract for the Future Soldier (Enhanced) System that is marketed under the name of Gladius



**2007**  
The 10 millionth water circulation pump is produced at Pierburg in Hartha



**2007**  
Storm Kyrill sweeps across wide parts of Europe, leaving 34 dead and causing serious damage of around 8 billion euros in Germany alone.

The G8 Summit (of the major industrial nations) takes place at Heiligendamm (Mecklenburg-Western Pomerania) in Germany



# Safe landing expected

In March 2004, the European Space Agency ESA launched the space probe Rosetta on an Ariane 5 launcher from the space station Kourou. The probe is to land on the comet 67P/Churyumov-Gerasimenko and place the "Lander" there. Discovered in 1969, the comet probably joined the orbit of Jupiter in the 19th century. Scientists hope that the very first landing of a space probe on this comet will provide information about the evolution and structure of the comet, and ultimately also deliver some information about other planets like the Earth. But why feature this history of a journey back to the Big Bang in the Rheinmetall magazine celebrating the group's 125th anniversary? Well, Rosetta can only use (and leave) its scientific instruments on the comet if it makes a perfect landing at estimated temperatures of minus 270°C. And this is where Rheinmetall comes into it since the landing wouldn't be possible without propellant powder from Nitrochemie. After all, the gravitation of the planet is not strong enough to simply position the probe there – it would bounce back like a rubber ball. To overcome this problem, a harpoon system has been developed – powered by a gas generator with propellant powder from Nitrochemie. After several years of controlled travel through space, contact with the probe was broken off in 2011 in order to save energy. After a space journey lasting ten years – including a communication break of 31 months – the eagerly expected signal from the Rosetta spacecraft was received on January 20, 2014. Rosetta has entered into the orbit of the comet and can now tackle the next tasks. We will know whether the landing has succeeded in November 2014 which is when the "Lander" is due to touch down on the comet 67P/Churyumov-Gerasimenko. It will be interesting to see whether this part of the mission is just as successful as the signal received on 20th January this year.

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## A break with civil tradition

In January 2013, Armin Papperger was appointed CEO of Rheinmetall AG, replacing the former incumbent Klaus Eberhardt. This may have seemed a perfectly ordinary event, but did actually constitute a break with a tradition that had been upheld since the year 1956. Indeed, since the family Röchling had taken "control" of the Rheinmetall group, it had always tried to uphold a strong focus on the group's civil activities, as reflected by the appointment of previous chairmen of the executive board. Neither Otto Paul Caesar (1956 – 1971), nor Dr. Hans-Ludwig Hockel (1971 – 1985), Dr. Hans U. Brauner (1985 – 2000), or Klaus Eberhardt (2000 – 2012) were defence experts but had earned their merits in companies like Bruderus, Hanomag, Bosch and Temic Telefunken. Armin Papperger is also the first CEO since 1889 to come from Rheinmetall's own ranks. Although this is another breach with tradition, continuity is certain: like all CEOs preceding him over the last 125 years, Armin Papperger will bring the Rheinmetall group forward.

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## "Das Profil", the Rheinmetall magazine

In its 99th year of existence, Rheinmetall decided to distribute a company magazine called "Das Profil". Since then, 118 issues have been published. The magazine has existed longer than any other Rheinmetall publication like the "Rheinmetall-Borsig-Werkzeitschrift" (1937 – 1943), the "Rheinmetall Informationen" (1974 – 1981) and the "Rheinmetall Report" (1982 – 1988). "Das Profil" and its English equivalent have always been the PR anchor of the group, combining the papers of former entities like the "Rheinmetall Report", "Jagenberg Informationen" and "Pierburg aktuell". Employees at sites in Germany and German-speaking foreign subsidiaries are informed about

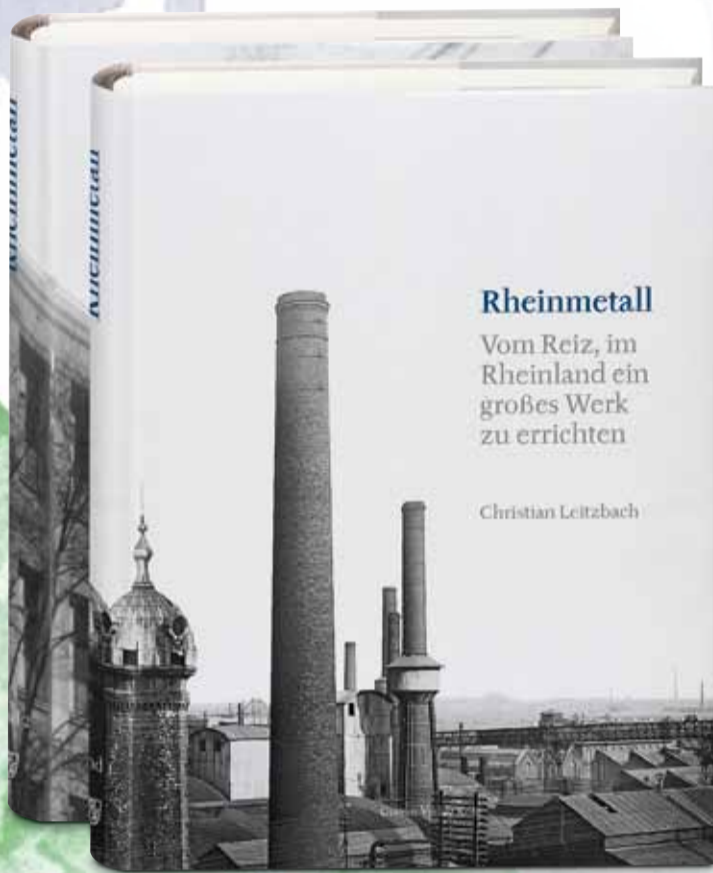
developments in all areas of the group. With the introduction of the international Newsline edition in 1990, people working at foreign subsidiaries have likewise been offered the chance to read about Rheinmetall activities in the English language newspaper. The layout and content of the paper have changed several times over the years; the most important change was in 2004 when the paper went online with Profil online and Newsline online offering frequent updates, sometimes daily, on Rheinmetall.

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<p><b>2008</b> Lehmann Brothers investment services declare bankruptcy</p> <p>Dmitry Medvedev wins the Russian presidential elections</p> <p>Hyde Park birthday concert for Nelson Mandela in London</p> 	<p><b>2008</b> Rheinmetall establishes a joint venture for munitions production with the South African company Denel</p>
<p><b>2009</b> Rheinmetall Air Defence presents network-enabled air defence system Mantis for near-range applications</p>	<p><b>2009</b> Barack Obama is sworn in as the 44th president of the USA</p>  <p>Treaty of Lisbon (concluded between 28 member states of the EU) takes effect</p>
<p><b>2010</b> Earthquake in Haiti (killing around 220,000 people)</p> <p>Sebastian Vettel wins his first Formula 1 World Championship title</p> <p>Tunisian Jasmine Revolution following the self-immolation of the green-grocer Mohamed Bouazizi (sparking the Arab Spring)</p>	<p><b>2010</b> Pierburg launches production of valves and pumps at the new plant in Takwe, India</p>
<p><b>2011</b> Pierburg commences development of the Range Extender for extending the range of cars with electric motors</p> 	<p><b>2011</b> Fukushima I (and other) nuclear power plant disaster in the wake of the earthquake and tsunami in Japan (with a death toll of around 15,000)</p> <p>Terrorist Osama bin Laden is killed by US troops in Abbottabad/Pakistan</p> <p>Germany abolishes compulsory military service in peacetime</p> <p>Muammar al-Gaddafi, the former Libyan dictator, is killed</p>
<p><b>2012</b> Mohammed Mursi is elected President of Egypt</p> <p>Death of Whitney Houston (February 11) and Donna Summer (May 17)</p>  <p>Nobel Peace Prize awarded to European Union</p>	<p><b>2012</b> The hand-held rocket Mithras from Silberhütte is used in the James Bond movie Skyfall</p> 
<p><b>2013</b> Pierburg lays the foundation stone for the new plant Niederrhein in Neuss</p> 	<p><b>2013</b> Pope Benedict XVI steps down and is succeeded by Pope Francis</p> <p>Coronation of Willem-Alexander as King of the Netherlands</p> <p>Whistleblower Edward Snowden leaks information about global surveillance and spying activities of the US secret services (NSA affair)</p>
	<p><b>2014</b> Unterlüß becomes production center for the new Puma infantry fighting vehicle</p> 

# Ehrhardt: Not the founding father



## Book to mark 125<sup>th</sup> anniversary

Over the years, many people have asked whether there is a book about Rheinmetall's history: at last, the answer is yes, the book will be in the bookshops from autumn 2014 onwards. Entitled "Rheinmetall – Vom Reiz, im Rheinland ein großes Werk zu errichten" and published punctually to mark the 125th anniversary of Rheinmetall, a two-volume book about the history of the group, written over a five-year period by Rheinmetall historian Dr. Christian Leitzbach, will be available. Starting with the foundation of Rheinmetall in the year 1889, readers are offered a wealth of information about corporate history during the period of the German Kaiser, and developments during the Weimar Republic, the Nazi era, the Cold War and more recent history following the fall of the Berlin Wall. Leitzbach outlines technological developments of the Defence and Automotive sectors as well the engineering activities of former Rheinmetall members like Jagenberg and puts these into a socio-historic context. The book addresses sensitive subjects like Rheinmetall's involvement in the Hitler regime, forced labour and arms exports, but also highlights the determination of former managers who persevered and fought for the survival of the Düsseldorf-based company in difficult times when others gave up (for example, following the defeats of 1918 and 1945 and – on a more positive note – the fall of the Berlin Wall).

The book is published by Greven-Verlag in Cologne and is available from bookshops at a price of €39.80.

They all suddenly reappeared for the centenary celebrations of Rheinmetall: the "risk-taking" men who are said to have founded the company together with Heinrich Ehrhardt. What sounds like a business deal sealed with a handshake in a smokey pub was in fact much less exciting when one looks at the documentary evidence. The Articles of Association dated May 13, 1889, give the names of the men who were allegedly happy to take the risk, but Ehrhardt's name doesn't appear on the document. In other words, he was not one of the founding fathers of Rheinmetall. Ehrhardt himself unintentionally contributed to this: in his autobiography, he wrote of "his" Rheinmetall but never claimed to have founded the company. For someone who always made sure he appeared in the right light, the lack of any reference to his role as a founding member speaks for itself.

If not Ehrhardt, who was the founder of the company? Rheinmetall's archives don't offer an answer to this question. It seems it could have been the Hoerder Bergwerks- und Hüttenverein, the Ruhr Corporation which gave Rheinmetall its first munitions order. Some historical evidence still exists in the archives of ThyssenKrupp AG in Duisburg: after receiving the order from the Reich, the director general of the Hoerder Verein, Joseph Massenez, borrowed money from his house bank Schlesinger Trier & Co to found his own company to execute the order: and this was Rheinmetall. This is where the "risk-taking" men come into it: they were all Frankfurt bankers who provided the capital. The consortium was established by Lorenz Zuckermandel, one of the owners of Schlesinger Trier & Co., who was also the first supervisory board chairman of Rheinmetall. And what about Heinrich Ehrhardt? Even if he wasn't one of the founding members, he still played a vital role in the development of Rheinmetall: personally charged with directing the company by Massenez, he was responsible for purchasing machines, recruiting staff, building the Derendorf plant and performing the order. Last but not least, Rheinmetall's future was secured by Ehrhardt's extrusion and drawing process and the co-invention of the first barrel recoil cannon fit for field service. But that is an entirely different story... **cl**

### IMPRINT

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