70

KEMPPI

ANNIVERSARY

DEAR CUSTOMER, PARTNER, KEMPPI EMPLOYEE

Kemppi's story of growth into one of the world's top-rated companies in the field of welding is a journey of three generations. It is a tale of hard work and unyielding determination, belief in dreams, and the courage to make them a reality. It is also a tale of family, work, and passion. In 70 years, Martti Kemppi's vision has grown into a pioneering company employing more than 800 welding experts in 17 subsidiaries around the globe.

We want to thank everyone who has taken part in this journey!

We hope you will find it an inspiring story to read.

The Kemppi family

Lahti, November 25, 2019

Contents

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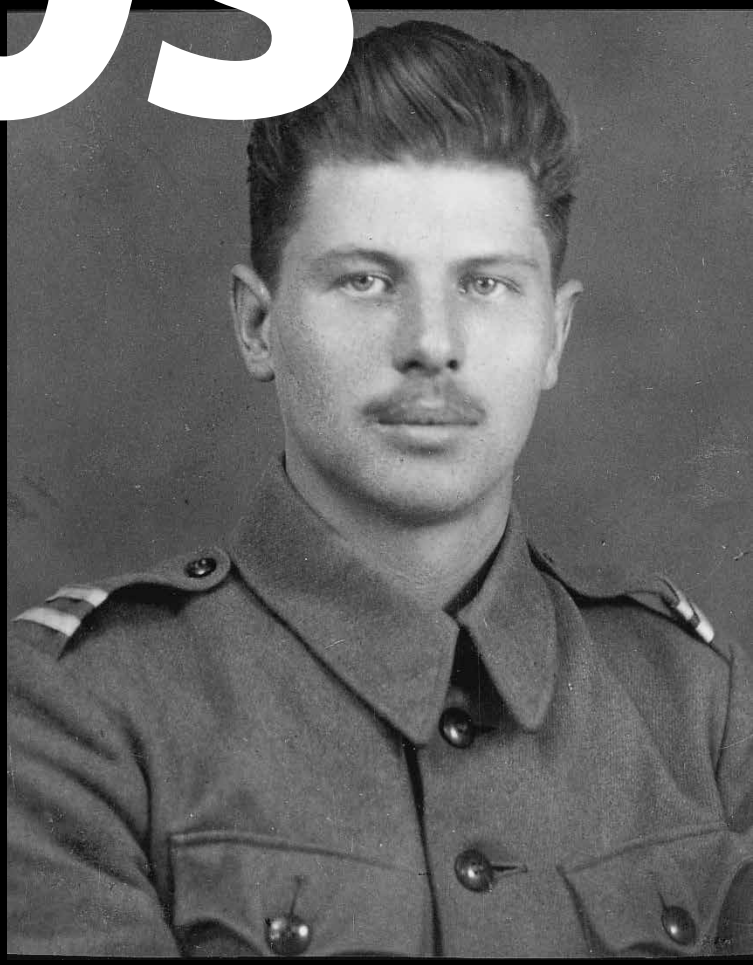
ISBN 978-952-94-2814-4 (bound)
ISBN 978-952-94-2815-1 (Flipbook)
Print: Markprint Oy, Lahti 2019

1940s



Martti Kemppi fought in the Winter War in Yläsommee and Viipurinlahti. In the Continuation War, he served on the Karelian Isthmus. He learned about arc welding at the barracks repair shop when he was maintaining the electrical equipment in the 10th Division's vehicles.

Martti becomes an entrepreneur

THE YEAR IN WHICH KEMPPI TURNS 70 ALSO MARKS 100 YEARS SINCE MARTTI KEMPPI'S BIRTH. WHAT WAS HE LIKE? HE SURVIVED TWO WARS, WAS FORCED TO LEAVE HIS HOME BEHIND IN KARELIA AND WORK AS A SHEPHERD AT THE AGE OF 11. AND HE ESTABLISHED A COMPANY THAT NOW EMPLOYS MORE THAN 800 PEOPLE IN 17 COUNTRIES.

Martti Kemppi was a multi-talented, warm, honest, innovative, and courageous man. Courage and inventiveness were needed because when Martti arrived in Hollola in 1940, following the Winter War and the family's evacuation from Karelia due to the war, he had nothing more than the army uniform on his back, his skillful hands, and a desire to work. The family later moved to Lahti, where Martti finally settled.

The Kemppis were by no means the only ones moving to Lahti – there were thousands of other Karelians who had lost their homes. Lahti had suffered from the air raids in the Winter War, and Sweden donated some houses to ease the housing shortage. Some of these houses were built in a residential area known as Västerås. Martti Kemppi, a well-built man, found work on a construction site. He helped the masons with sledgehammering.

The work was strenuous. His hands swelled from the jolts, but the work put food on the table. *"My father had big hands, and he was skillful with them. Two of my fingers were like one of dad's fingers,"* remembers Jouko Kemppi.

It was not long before Martti gave up stonework and became an electrician. The young man had learned about the profession back in Vyborg – when he was 17, he worked as a helper at Suomi-Neon Oy. Kemppi worked at the Vikström electronics company in Lahti until the outbreak of the Continuation War.

During the Continuation War, Martti served as a Corporal in the 10th Division. He took care of the field power plant with his three assistants. They formed a mobile repair shop, which traveled along the Karelian Isthmus wherever it was needed. The work included winding the charging dynamos on vehicles and repairing electrical equipment. Martti learned to weld by repairing tanks.

"Since I was a boy, I've also worked with electrical installations, and I'm an electrician by training. During the war, I did electrical work in my Division. This meant that I didn't lose my feel for the work, and my professional skill didn't get rusty."

During the Continuation War, Martti Kemppi was supervised by Teemu Kärävä. The men became lifelong friends. Kärävä would later serve as a trusted legal adviser to Martti.

When Martti returned to Lahti at the end of the Continuation War, he needed to think about how to earn a living. Martti decided to put his electrician's skills to work and found a company with two of his friends, Tuure Nieminen and Vilho Vuori. Sähkö-Tarke Oy was an electric machine repair shop, which fixed all types of electrical devices. Sähkö-Tarke also manufactured a few welding transformers.

"We put in a lot of work, and we were given a business permit. All we had back then were healthy hands. We all

VELJEKSET KEMPPI OY

borrowed money from wherever we could. I had saved up a little," Martti Kemppi reminisced in an old interview.

The conditions in post-war Lahti were ideal for the young, imaginative men. Numerous companies moved to Lahti from various parts of Karelia, along with the refugees from the region. The city needed housing and commercial premises. The city had been badly damaged by bombing, and it was keen to put up new buildings. However, Finland in the mid-1940s was suffering from a dire shortage of machinery and building supplies. The enterprising men responded to demand. Welding machines were sold as quickly as they could be built.

The things that Martti had learned during the war helped him to develop functional solutions despite the austere conditions. Inventiveness was required to manufacture products – although demand was good and plenty of machines could have been sold, everything was in short supply. Finland was paying enormous reparations in the form of products from the metal and shipbuilding industries. What little material the country had and the flows of stringently-regulated imports were consumed almost entirely by the war reparation industry.

Everything that was possible to acquire was used for production. Scrapyards and the black market were scoured for copper thread and sheet metal, but the prices were high.

"*The people who had things were very aware of their value."*

When the voltage of distribution transformers was changed after the wars, the old transformers offered a rich source of materials. Copper wire was straightened in parks by wrapping it around trees. Brown paper and disposable paper sheets were used as insulation.

New raw materials only became available in 1949.

Tuure Nieminen, Vilho Vuori, and Martti Kemppi worked together "*for about a year.*" Martti sold his stake in the company in 1947.

He was still interested in entrepreneurship, but the prospect of a regular income was a more important consideration for a family man. Kemppi had married Sylvia Lehtinen in 1945, and the family's first-born child, Jouko, was born a year later, in 1946.

Martti returned to Sähkö-Vikström to work as an electrician. In the evenings, he built welding transformers by hand in his small workshop, which he had set up in a an 8-square-meter stable in the yard by his house.

The working days often stretched into the evenings. Every weekday, Martti punched in at Vikström at 7 a.m. After completing a normal day's work, he came home, ate dinner, and went out to his stable. There, he built welding transformers every night until 2 a.m. or 3 a.m. On Saturdays, he would stop at 6 p.m.

The stable lacked heating, so, in the winter, Martti Kemppi wore a fur coat while he worked. The one benefit of this arrangement was that the cold temperatures were very effective at preventing him from falling asleep on the job.

Martti built his welding transformers by hand because he had no machinery. He cut the sheet metal for the transformers using ordinary metal shears, and he made holes using a hand drill. On occasions, he was allowed to visit Eino Aaltonen's sheet metal shop and use the guillotine there.

The work was slow – it took a month to make a single transformer. The manufacturing process was based on Martti's own welding transformer formula, which went as follows: *"The number of winds on the coil is equal to 40 times the output voltage from the transformer divided by the cross-section of the transformer core."*

Kemppi Brothers manufactured welding transformers, as well as many other pieces of equipment, such as concrete mixers, soil scoops, and Mansikki milk carts. "Every farm needs one of our milk carts. On busy summer days, it frees up a horse, no matter whether the milking round or delivery run is long or short. The cart has large rubber wheels, so it is easy to pull down bumpy roads and over grass. Our carts make light work of water runs, which are often a major headache on farms, particularly for the women. Attach it to a bicycle, and the car can be used to transport items of all types, even over long distances," went the product brochure.

A bird's eye view of Nikkilänkatu in 1949. This is where the Kemppi brothers' business began to take off. The company was officially incorporated on May 23, 1949, and on August 25, 1950, it was registered as a limited liability company under the name Veljekset Kemppi Oy (Kemppi Brothers, Inc.). The registration stated that the company was engaged in "manufacturing, repairing, and selling electrical components, bicycles, machines, and products for the construction and metal industries."

Pictured from left: Matti, Yrjö, Martti holding his son Jouko, Pentti, Maria Emilia (the mother), and Sylvia Kemppi by the new house at the address Nikkilänkatu 35. Larger premises were built for Kemppi Brothers in 1949, the year of the company's incorporation, as the former stables on Mustamäenkatu were no longer big enough.

Word spread of these reliable, Finnish welding machines, and the sales of the machines increased. In March 1949, Martti Kemppi left his job at Vikström to focus on establishing his own company.

His years on the front had taught Martti many things, not least a sense of responsibility. It went without saying that he would ensure his brothers Oiva, Yrjö, Tauno, Matti, and Pentti would be well set for the future, so he involved them in the company as minority shareholders – the family stuck together. Martti held onto 56 percent of the shares and gave the rest to his brothers.

Veljekset Kemppi (Kemppi Brothers) was registered as a general partnership on May 23, 1949. Martti and his brother Matti worked full-time for the new company, and the other brothers worked in the evenings.

In the early years, Martti Kemppi was the company's managing director as well as its production director, sales manager, sourcing manager, advertising manager, and office manager. The evenings and nights were spent making the products that the sales manager had managed to sell during the day.

The company's main product was a welding machine. However, as everything was in short supply in Finland, the workshop also manufactured welding carts, concrete and milk carts, soil scoops, fire ladders, and sauna stoves. The company's business idea was simple and functional: Listen to what customers need, and make it for them. This is a template that Kemppi Oy has continued to follow to this day.

Martti Kemppi was a visionary, and he always aspired to create something new. According to his daughter, Eija Vartiainen, Kemppi had a unique ability – like an artist – to visualize the finished work before he had begun. In an old interview, Martti explains that *"first of all, it is always worth thinking about what you are making, how you are going to make it, and what you are going to make it from – then you can think about whether you can sell the product if you make it like that."* This, and his ability to recruit talented people, such as Veikko Suurmunne and Martti Kanervisto, who would

MARTTI KEMPPI HAS SAID THAT KEMPPI OY PROBABLY WOULD NOT EXIST IF IT WERE NOT FOR HIS WIFE. "SHE NEVER INTERFERED WITH THE WORK IN THE FACTORY, BUT SHE KEPT EVERYTHING IN GOOD ORDER BEHIND THE SCENES AND SUPPORTED EVERYTHING ELSE."

later be involved in creating successful products, helped to develop entirely new types of welding equipment throughout Kemppi's long career.

"This type of success could not be the work of just one man. I succeeded in finding a really good crew to work with, and I was able to lead them. And in the end, it's down to the director to get people going," Martti Kemppi said when Kemppi employed hundreds of people in addition to the family and was the market leader in its field.

The company could not have expanded without the entire family's help. While Martti was building welding machines, Sylvia Kemppi and Martti's mother, "Grandma Emi," looked after the home and took care of the boys. Hannu, the family's second son, was born in 1949.

When Sylvia served in the Lotta Svärd organization, she had helped to cater for the Karelian refugees in Kouvola and Vuolenkoski. As Kemppi began taking on more employees, it was natural for her to take responsibility for food service in the early years.

Martti Kemppi has said that Kemppi Oy probably would not exist if it were not for his wife.

"She never interfered with the work in the factory, but she kept everything in good order behind the scenes and supported everything else."

The family moved to Nikkilänkatu in 1949 when the brothers finished building the house. The house had five apartments and a yard building. The workshop was moved to the basement.

FACTS:

1919 Martti Kemppi was born on September 13 in Kuparsaari in Antrea, into a family with 11 children.

He fought in Summa, Yläsommee, and Viipurinlahti.

In the Continuation War, Martti served on the Karelian Isthmus.

1945 Martti Kemppi married Sylvia Lehtinen.

1946 Jouko Kemppi was born.

1949 Hannu Kemppi was born.

1949 The family and the workshop moved to Nikkilänkatu.

1949 Veljekset Kemppi (Kemppi Brothers) was registered as a general partnership on May 23, 1949.

1950s

Demand for Kemppi's products grew rapidly, and the company needed more employees and production space. In 1950, the company bought industrial real estate in Pekanmäki, Lahti. The photo shows Kemppi's staff celebrating the company's 10th year in business in 1959. Mari Siponen, pictured on the left leaning against a birch tree with a coffee pot in her hand, kept the place tidy and the guys in line.

"Kemppi machines are good to weld with."

IN THE 1950S, THE COMPANY RECRUITED ITS FIRST EMPLOYEE FROM OUTSIDE THE FAMILY, BEGAN INTERNATIONALIZING, DEVELOPED A SPOT WELDING MACHINE, AND EXPERIENCED ITS FIRST RECESSION AS THE GENERAL STRIKE OF 1956 PUT A DAMPER ON THE DOMESTIC MARKET.

Post-war Finland was developing at pace, and life became easier in the 1950s. The country's four million inhabitants became wealthier, and the economy industrialized at a brisk rate. New buildings were going up everywhere as job-seekers streamed from the countryside into the towns and cities, and the people evacuated from war zones had come to stay. A large number of small-scale engineering workshops sprang up in Lahti, and they needed good welding transformers.

Before 1949, welding machines were only made in small numbers in Finland. Demand was met by imported machines from Sweden and Germany. To begin with, one of Martti Kemppi's greatest difficulties was to get buyers to believe that Kemppi machines were up to the task of welding.

The reputation of the devices as functional and reliable machines gradually began to spread, and people all over Finland began buying them. The unique selling point of the machines was that they were made in Finland, and as they held their own against imported machines in terms of price and quality, the company had a recipe for success. The orders flooded in, and Kemppi increasingly focused its expertise on manufacturing welding machines.

"The LAHTI arc welding transformer is manufactured from the best materials. The coils are impregnated with insulating varnish so they can withstand various air fluctuations. Protected by a sturdy sheet iron housing," was the promise in the product brochure in the early years.

Initially, Oy Julius Tallberg was responsible for selling Kemppi's machines in Finland, but the network of dealers expanded rapidly.

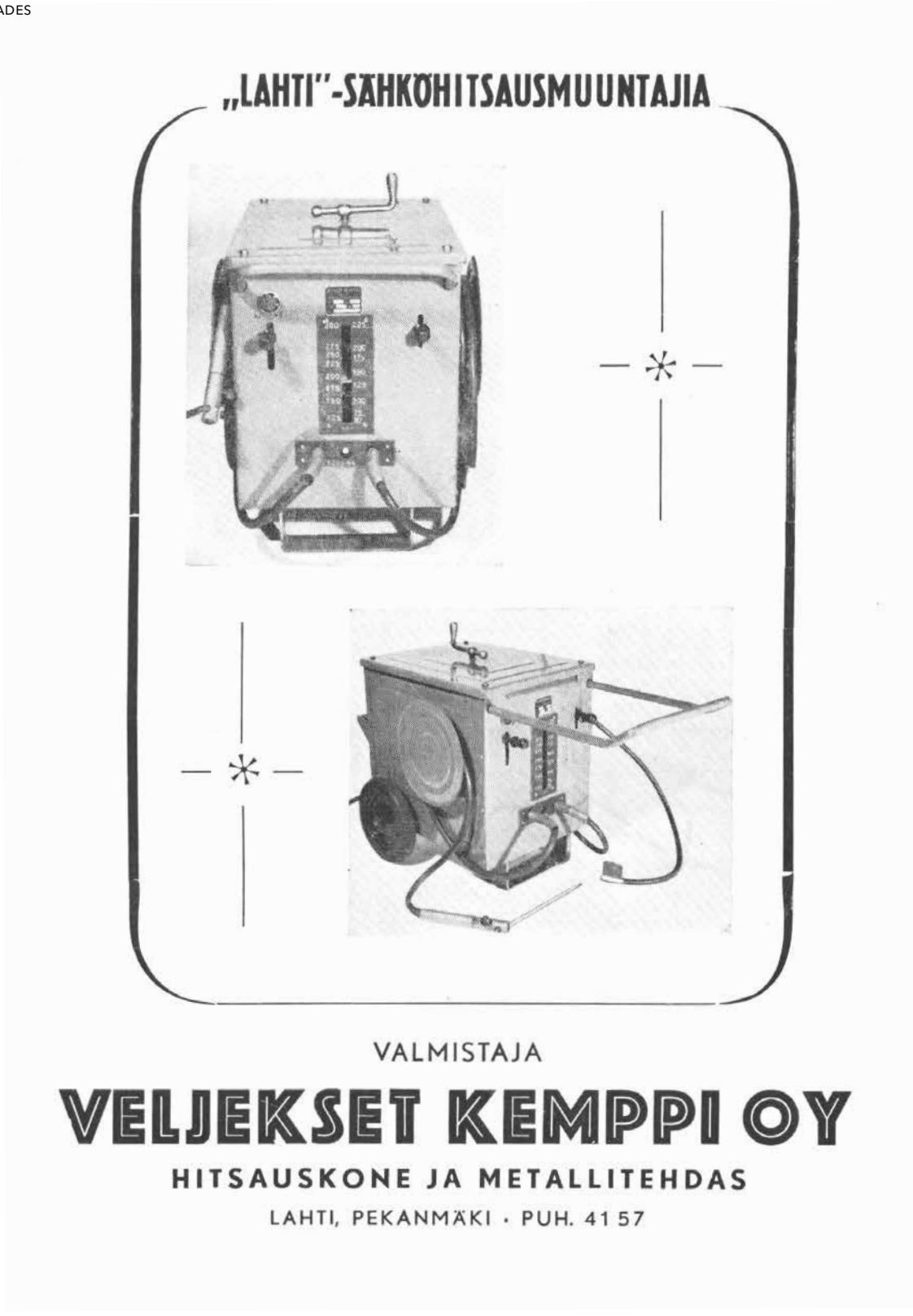
At that time, Tallberg was still a building supplies store. Construction firms and private builders needed all sorts of things, and they bought it all from Tallberg. Stig Johansson, who ran Tallberg, believed in Martti and the Kemppi machines, and he even lent money to Martti against his order book when times were hard. At that time, wages were paid in cash and, on payday, Kemppi's cash box was empty. For Martti, paying invoices and wages on time was a matter of pride, and he always got the money together every time.

The Kemppi Brothers partnership was incorporated as a limited liability company on August 25, 1950. When Veljekset Kemppi Oy (Kemppi Brothers, Inc.) was incorporated in the city of Lahti, the registration stated that the company was engaged in *"manufacturing, repairing, and selling electrical components, bicycles, machines, and products for the construction and metal industries."*

The success of the first few years made the future look bright, so when Martti Kemppi had the opportunity to buy a piece of industrial real estate in Pekanmäki, Lahti, in 1951, he jumped at the chance.

"I drove over to look at it with my brother Pentti in a van made from an old Studebaker car. After a couple of hours of discussion, I told Olavi Rautto, who owned the property, that I would buy it. We agreed to pay five million Finnish marks. At that point, I had about four thousand in my wallet. I asked him whether he needed a down payment, and when he told me that there could be no deal without one, I handed the four thousand over to him. My younger brother nearly fainted. He asked me what we would do for money after that," Martti Kemppi recalled in an interview about buying the factory.

The next day, the vendor called and said that a cash


„LAHTI"-SÄHKÖHITSAUSMUUNTAJIA
VALMISTAJA
VELJEKSET KEMPPI OY
HITSAUSKONE JA METALLITEHDAS
LAHTI, PEKANMÄKI · PUH. 41 57

buyer had been found for the real estate. The deal would be off unless Kemppi could pay one hundred thousand Finnish marks straight away.

Hannu Kemppi described how his father went to the bank to ask for a loan to buy the property. *"The manager of the Nordic Union Bank at the time, Jalo Kumela, was very rude to my father. However, after a long discussion, dad got a loan of 100,000 marks to cover the down payment on the real estate. Dad had a fantastic ability to get others to believe in him and his visions."*

The repayment schedule for the industrial property was strict, and the installments came at short intervals. On many an occasion, a loan installment was due the following day, and Martti Kemppi still did not know where he was going to get the money from, but he always managed it somehow. Once, a familiar market stallholder came to the rescue. Another time, a friend, Jussi Virtanen, received a panicked phone call in the evening and sent a check by train.

"We scraped together the final installment while the vendor was sitting in my kitchen, drinking coffee, and waiting for his money. At the last moment, I managed to sell the final little apartment, but I was still 20,000 Finnish markka short, so I ran off to borrow it from the market stallholder next door."

Teemu Kärävä had advised Martti to covert the Nikkilänkatu buildings into a limited liability housing company and sell all five apartments and the yard building separately. This made them easier to sell, and they fetched a better price when they were sold separately. At the time, Nikkilänkatu was the smallest limited liability housing company in Lahti.

In Pekanmäki, the company built an industrial hall and cold storeroom and renovated a building for the family to live in. The lot was situated on a strip of land between the railroads to Kouvola and Heinola along the Vyborg highway.

Work and home were literally under one roof in Pekanmäki. Part of the factory was converted into the family's home, and it had a direct view over Martti Kemppi's office. This meant that the father was a presence in the family's everyday life, although he spent most of his days in the factory. In Pekanmäki, the family got bigger with the birth of Eija, their daughter, in 1954.

"Dad believed in hard work. Normally, we only saw him for sauna evenings on Saturdays or late at night if we happened to be awake," Jouko Kemppi recalls.

Now in its own factory, Kemppi Brothers, Inc. really took off. In 1951, the company recorded revenues of just over 5,000 Finnish marks. The following year, revenues were almost 58,000 marks, and after that, almost 90,000 marks. They broke the one-million-mark barrier in 1960.

The number of personnel also increased. From the very beginning, Martti was able to judge which things should be done in-house and which could be bought in. The principle was to staff the company with as much knowledge and skill as it could afford and obtain. *"Always hire people who are wiser than you are,"* was Martti's advice, which is followed at Kemppi to this day. For his, it was also a matter of pride to know everyone who worked at Kemppi, even though the number of personnel increased over the years. He regularly walked around the factory, talking to people and asking how they were doing.

"Dad was old school. In his view, making a profit was not the sole purpose of a business. The company should also enable a better standard of living and better conditions for the family and for Kemppi's employees," Eija Vartiainen recalls.

In addition to expert personnel, Martti also endeavored to obtain original technology for the company – things that were suitable for Finland and not just copies of foreign equipment.

Kemppi hired its first employee from outside the immediate family in 1951. He was Veikko Lehtinen – Sylvia Kemppi's brother – and he worked as a coiler. In 1953, a couple of years on, the company had 11 employees, five of whom were the Kemppi brothers.

One of the employees was Veikko Suurmunne. He first joined Kemppi for a summer job in 1953. A couple of years later, Martti Kemppi asked Suurmunne, who had graduated with a master's degree in engineering, to design a spot welding machine for Kemppi, as customers were using increasingly thin sheets of metal, which the old welding machines would break. They needed to make a machine that could be used to weld thin sheet metal without any problems. Suurmunne took on the challenge, although he was not particularly familiar with welding technology. He learned about it by borrowing literature from the Helsinki University of Technology.

After making the spot welding machine, Kemppi began


Jarkko Arola
Vuori
Eero Mäntynen
Aarre Tuhkanen
Olavi Salo
Veikko Suurmunne
Mauno Kuusivuori
Martti Kemppi
Ilmari Lehtinen
Veikko Appola
Oiva Kemppi
Veikko Lehtinen
Ensio Mustonen
Vinsta Ahonen
Virtanen
Pynnönen
Mäkinen
Reijo Kemppi
Liisa Kemppi
Eija Kemppi


Sylvia Kemppi
Tapsa Johansson
Jaakko Meiseri
Eino Peltonen
Siponen
Anja Puoli-Hanka
Matti Kemppi
Erkki Lötjönen
Yrjö Kemppi
Mari
Veijo Oivo

SALES OF THE MACHINES WERE CONSTANTLY IMPROVING, AND A LOGO WAS NEEDED. THE BRAND MARK DEPICTING A WELD WAS INTRODUCED IN THE MID-1950S.

developing a welding machine using a rectifier. The potential applications of rectifier technology were not properly known at the time, but Kemppi believed that the technology would also be suitable for welding. Suurmunne had the idea when he saw a photograph in an American magazine. The photo also showed a transductor – a technology that was not yet known in Finland. The photo revealed it to be a choke coil, but the regulation mechanism was unclear. The only way to find out was to try various alternatives until it became apparent that direct current saturation was effective.

The first rectifier was presented in Helsinki in 1960. A couple of years earlier – in 1958 – Kemppi had launched the first gas-shielded arc welding machines.

Kemppi had striven to be user-oriented ever since it released its first products. From the outset, Martti Kemppi treated the welder as the customer, and this was the principle for the design of every machine. This viewpoint differed substantially from the company's competitors elsewhere in Europe. While competitors concentrated on designing various additional refinements and features for devices, Kemppi strove to provide simple solutions and thought about what could be removed from devices without compromising on the welding result. The lack of raw materials in the initial years had forced the company to maximize efficiency in austere times: the simpler the device, the less material that is needed.

In the 1950s, the company hired qualified engineers and technicians to join its design department, and these people were involved in laying the foundations for Kemppi quality. Sakari Raevaara, an engineer, was hired to become Kemppi's product development director in 1959. He was responsible for developing several new welding machines over the following years. Suurmunne was able to focus on general management and operating as Martti Kemppi's right-hand man.

User-orientation and inventiveness still remain the starting points for product development. This means that the company must understand the customer's needs and do it better than its competitors. And remember that *less is often more*.

The visual appearance of the products also revealed how Kemppi had established its position. Pentti Santala was recruited to provide a new visual design for the products. The monochrome gray of the machines was replaced by a green hammer finish, and the boxy rectifiers had tall, narrow bases equipped with wheels. The MIG machines grew in height. The portability of the narrower machines improved, and they took up less floor area. Small engineering workshops, which made up most of Kemppi's customer base, were happy to have machines that saved on space.

The machines were selling well, and they needed their own logos. Veikko Suurmunne's wife, Marjatta Suurmunne, designed a brand mark for Kemppi with the appearance of a weld, and the logo was introduced in the mid-1950s.

Sylvia and Martti Kemppi with the children Jouko, Eija, and Hannu.

Demonstrator vehicles in the grounds of the Pekanmäki factory.


kemppi-koneilla
kelpaa hitsata
VELJEKSET KEMPPI OY

Finland's economy boomed in the mid-1950s once the reparations had been paid and the doors to the West were opened up. Kemppi's products sold well in Finland, and this encouraged the company to branch out into new markets, just as it had for many other companies.

"We'll have Metex take care of trade fairs." This was how Martti Kemppi got exports started. Metex was an export organization for the metal industry founded by the most significant companies in the war reparation industry. Kemppi joined Metex as a member because it did not have the resources to hire its own export personnel at the time.

Metex included Kemppi's products in its program, and the company began to receive requests for quotations. The first Kemppi rectifiers were shipped to Turkey in 1955.

"It didn't go well – payments between Finland and Turkey were extremely bad. One day we received a letter from the state saying that if we wanted to get any money for our goods within three months, we would need to give the Turkish customer a 20-percent discount; otherwise, it could take years before we got anything back. Foreign trade had got off to an inauspicious start, but it gradually got better," Martti Kemppi said about the early years of exporting.

Ramping up exports was also important for sales in Finland, as success on foreign markets was highly regarded in Finland in the 1950s. When a general strike brought the Finnish market to a halt in 1956, the export trade grew in importance even further.

In the early years, exports were limited to individual, dispersed deliveries to exotic countries such as Thailand, Vietnam, Nigeria, Tanzania, Peru, and Chile, in addition to Turkey. Kemppi's strategic choice was to focus its exports on countries where no welding equipment was manufactured. This was founded on the idea that it would be easier to gain a foothold in countries that did not have any domestic manufacturing of welding devices. Only later did the company realize that this was not true. The opportunities to compete are often better in countries where there is a production base. The products sold in such markets have certain quality and price levels, and it is easier to create a niche in the market for the company's own machines.

Once the company had exported projects to faraway lands for a few years, they sought to replace one-off orders with longer-term customer relationships. The first step in this process was to make a representation agreement in Sweden in 1959. Establishing a market position in Sweden also opened the doors to the other Nordic markets.

In the early years, Kemppi's most important export products were welding transformers with standard structures and welding rectifiers. Resistance welding machines and gas-shielded arc welding machines were also a factor in conquering export markets. Specialist welding machines and automation devices accounted for a steadily increasing share of exports.

Exports to Sweden provided good experience on which to build the export trade, as there was fierce competition on the Swedish market. The market provided Kemppi with valuable information about its products' maturity for export in terms of both price and quality.

FACTS:

1951 The move to Pekanmäki.

1951 The first non-family employee was hired.

1954 Eija Vartiainen (née Kemppi) was born.

1955 The first Kemppi rectifiers were shipped to Turkey.

1959 Representation agreement in Sweden.

LIFE IN THE FACTORY

Martti Kemppi's family life revolved around the factory, both in Pekanmäki and later in Okeroinen.

Jouko Kemppi remembers going on an excursion as a child. They packed a lunch of French bread filled with mustard and a bottle of milk. Then they walked 30 meters (100 feet) to the railroad embankment to eat their picnic.

Hannu Kemppi remembers the men playing ball games in the grounds of the factory during their lunch break.

"*I told mom that I needed a packed lunch as well. I went to the bicycle rack to eat it, pretending that I was on my lunch break.*"

It went without saying that they would work in the family company, and everyone pulled their weight. "*We're not supporting idlers around here,*" was Martti's motto. When they reached the age of 13, the boys started working at the factory after school. Eija helped her mother around the home.

"*Work, the factory, and the home were one and the same. They were inseparable. One way or another, Kemppi always ended up being the topic of conversation at the dinner table,*" Eija Vartiainen recalls.

The annual stock-taking in the warehouse always fell during the school Christmas holiday, and it was the boys' job. Hannu remembers how he and Jouko tried to shirk the job by going to sleep in the warehouse, but this was not the solution. The warehouse manager fetched the boys and put them to work.

Counting the inventories of thousands of items taught them discipline and inventiveness. There were no computers back then – everything was counted by hand. They learned that once you know the weight of 100 screws, you could use a multiplication table to work out how much 10,000 screws weigh. It was not exactly critical if the number was off by a couple of screws.

At that time, a carpenter was paid five Finnish marks an hour. The boys earned 50 pennies an hour.

Martti Kemppi in office.

1960s

A time of growth

Construction of the Okeroinen factory began in the 1960s.

IN THE 1960S, KEMPPI BROTHERS, INC. DEVELOPED A THYRISTOR-CONTROLLED RECTIFIER, AS WELL AS ITS FIRST MIG/MAG WELDING EQUIPMENT. BY 1968, THE COMPANY'S ANNUAL REVENUES HAD CLIMBED TO ALMOST EIGHT MILLION FINNISH MARKS, AND EXPORTS ACCOUNTED FOR CLOSE TO TWO MILLION OF THIS SUM.

At the turn of the 1960s, Lahti was Finland's fourth-largest city. Strong industries and the city's central location ensured that Lahti continued to grow steadily. People moved from the countryside to the cities, or they went to Sweden to look for work.

Kemppi also strengthened its position in Sweden. In 1960, Kemppi sold 61 machines to customers in Sweden. In order to increase sales, Martti Kemppi made a clear operating plan for the coming year. It included the following actions:

1) Printing 10,000 brochures in Swedish.

2) Representatives to send folders to 3,000 customers presenting the company's products.

3) A major advertising campaign to begin in trade journals in Sweden.

4) Representatives to send two of their sales engineers to Kemppi's factory in Lahti for a week-long familiarization and learning period.

These actions required a lot of money. Help was available in the form of state export subsidies, and Kemppi managed to raise awareness among people in the welding industry in Sweden. In 1961, Kemppi delivered 92 machines to customers in Sweden.

Other forms of collaboration were also found in Sweden when Oerlikon, a supplier of welding gases and stick electrodes, joined forces with Kemppi. The collaboration benefited both parties: Kemppi needed a greater foothold, and Oerlikon needed welding machines. Thus, the Lahti factory began making Oerlikon's green machines in addition to its own products. Kemppi began importing stick electrodes, which became known as Oerlirods.

The collaboration also improved the technical standards of Kemppi's machines. Henry Lundström, who worked at Oerlikon, tested Kemppi's machines and gave feedback. Under Martti Kanervisto's leadership at Kemppi, some components were replaced in the machines, which were then re-tested until the desired end result was achieved.

Export activities also became well established in the other Nordic countries in the 1960s. At the end of the decade, the company was exporting to 20 countries via various representatives, and exports accounted for 30 percent of sales. Exports went to countries such as the U.K., Switzerland, Austria, and Portugal. Kemppi machines were manufactured in Spain and Italy under licensing agreements.

The network of importers and distributors expanded at the same pace as the number of new export countries.

"Every entrepreneur who seeks to export products must remember that they will only find buyers for good products. Export marketing is also expensive and time-consuming, which is why it must be well planned," Martti Kemppi stated in an old interview.

Exports were promoted by attending trade fairs around the world. Every four years, a specialist fair for the welding trade was held in Essen, Germany, and this also set the rhythm for the design of new products.

KEMPPI'S INTERNATIONALIZATION ACTIVITIES RECEIVED FINLAND'S HIGHEST FORM OF RECOGNITION WHEN PRESIDENT URHO KEKKONEN HANDED MARTTI KEMPPI THE EXPORT PRIZE IN 1968.

Kemppi began developing semi-automatic welding devices at the turn of the 1960s. Semi-automation meant that MIG/MAG welding machines used a filler wire melted by a constant short circuit instead of using stick electrodes. It took a long time for the first version to make it to market, but the most important thing was to get product development started. Products went through several phases of development before they were ready to be presented to customers.

The product development team was able to take a decisive step at the end of the 1960s when an old welder told Martti Kanervisto, an engineer who was hired as a product development engineer at Kemppi, that Kemppi's machines were good, but the current began to drop after a few stick electrodes. Kanervisto had built a welding machine at Strömberg a few years previously, and he felt that he had been educated for precisely this type of task. The problem was solved when Kanervisto added a TRIAC control and temperature sensor to the device. This kept the excitation current stable when the temperature rose.

At the same time, Kemppi developed a multi-purpose power source for the VTT Technical Research Centre of Finland in collaboration with VTT and Professor Olavi Eiro. The collaboration had far-reaching consequences for Kemppi. As Kemppi's engineers worked on the development project, they were faced with several technical questions that contributed to the completion of the multi-purpose power source and the launch of the thyristor-controlled rectifier.

Kemppi delivered the multi-purpose power source to VTT in 1968. In the same year, the company publicly announced its TYLARC power source based on thyristor control.

The company's production activities moved out of Pekanmäki and into the new premises in Okeroinen in summer 1967, while the family had moved to an old house on the lot two years previously. The economy was about to plunge into recession, and businesses were focusing on survival. Construction of the factory had required major investments, and there was nothing left in the bank.

"Let's design even better. Let's work even more carefully. Let's sell more effectively and keep our costs under control. Together, united, we are strong," said Martti Kemppi in a speech delivered to staff at the lunch to celebrate the opening of the new factory.

"We were close to going bust. The devaluation of the Finnish marks in 1967 saved us, as exports began to pick up. Foreign trade provided us with currencies at good exchange rates as we repaid our Finnish loans," Hannu Kemppi recalls.

The second decade of Kemppi's export operations came to a head in 1968 when Finland's President, Urho Kekkonen, awarded the company a prestigious export prize. Martti Kemppi and Veikko Suurmunne visited the Presidential Palace to collect the prize.

The prestigious prize is still awarded, but it is now known as the Internationalization Award of the President of the Republic. The prize encourages Finnish companies to internationalize.

President Kekkonen showed his appreciation in other ways. In the 1960s, a large fair was held in Lahti, and Kemppi had a booth. President Urho Kekkonen was one of the fair's regular honorary guests. He always visited Kemppi's booth.

As exports increased, Veljekset Kemppi Oy changed its name to the simplified Kemppi Oy (Kemppi, Inc.) in 1968. Around this time, the logo also changed to include a V-shaped design showing a weld viewed from the side, a motif that was introduced in the 1950s.

FACTS:

Kemppi's products in the 1960s

TYLARC power source
LH and LM transformers
EKA and LARC rectifiers
POLARC multi-location rectifiers
KP and KAP spot welding devices
RATAK+Lisa and MIGOMAT MIG devices
LIWATO multi-purpose machines
BEKOMAT concrete heating transformers and battery-charging devices
LTDP surface treatment devices

THE OLYMPICS OF THE WELDING INDUSTRY

The Schweissen und Schneiden trade fair held in Essen, Germany every four years was long considered the Olympics of the welding industry. The fair set the rhythm for product launches. Essen was the place to show new things to customers as well as to competitors. It was also a place to keep a close eye on competitors' booths and consider what to bring to the next fair.

Expectations always ran high before Essen, and the product development department was run off its feet. They worked day and night to create products that could be exhibited in Essen.

They were not always finished in time. For example, the company presented its Hilarc product family, the first devices to be based on inverter technology, in Essen in 1977. The machine, which was given the working name VINKU 400 ("vinku" being a Finnish word referring to a loud noise), was still in the prototype phase when the fair began, but the company decided to exhibit it anyway. The Hilarcs were a success, and when they went on sale the following year, export sales exceeded domestic sales for the first time in the company's history.

Decades on – in 2001 – the Hilarc 250 was presented at a historical exhibition of the Essen welding industry fair as one of the most important milestones in the history of welding technology.

From the outset, Essen was a significant springboard into international markets for Kemppi. Besides the Hilarc, customers have seen many other iconic devices in Essen, such as the Minarcs and FastMigs. At the Essen fair in 2009, Kemppi introduced the world's first IoT-based monitoring system for welding, the Kemppi ARC System.

Essen is about more than just what is presented – it is also important how things are presented. Kemppi has always known how to combine its fair booth and new products in a way that has attracted customers' interests almost as much as new products.

In 2005, Kemppi's UK sales director, John Frost, had an amazing idea. It combined the Kemppi slogan at the time, *Joy of Welding*, with an animation. Kemppi's welding machines were brought to life, becoming animated characters with arms and legs. The video shows the characters competing against other welding devices in various sports. Perhaps by chance, the welding devices that failed to win the sporting competitions were deceptively reminiscent of products from Kemppi's competitors. Frost remembers how the video attracted swarms of viewers when it was shown once an hour – including competitors. After a few days, competitors' lawyers also came to see it.

In 2017, when Kemppi demonstrated the welding of the future, the booth was constructed in the form of an old, ramshackle machine shop that had been taken over by the welding devices of the future. The welding demonstrations held at the booth were streamed so they could be followed live all over the world – not just at the fair.

ALDER THICKETS AND DEEP CLAY PITS

In 1963, Kemppi bought 18 hectares (almost 45 acres) of land from the City of Lahti. Martti Kemppi paid one mark per square meter (10 square feet) for the land in Okeroinen. The place was anything but ideal for a large factory, as the lot was full of alder thickets and deep clay pits. Hannu Kemppi recalls trudging through deep mud when the factory was built.

It took a lot of work, but the ground was eventually prepared, and construction could begin.

Before the new factory was built, the old house on the lot was renovated to serve as a home for Martti Kemppi's family. Once that was done, construction began on the factory building. Martti, Sylvia, Jouko, Hannu, and Eija Kemppi moved from Pekanmäki to Okeroinen in summer 1965. The staff celebrated the opening of the factory in 1967.

In the first phase of construction, a modern factory with a floor area of 5,000 square meters (54,000 square feet) went up in Okeroinen. A further 2,000 square meters (21,500 square feet) was built in fall 1969. The architect, Seppo Kärävä, died soon after the construction project was completed, and the extension was designed by the architecture bureau of Kari Karjalainen and Reijo Salo in 1972.

When the factory was extended, one section of the land was left without piling, a decision that would prove costly later on. The end of the building gradually subsided until it was a meter (3 feet) lower than the other end of the building. That part of the factory has now been demolished.

Kemppi has always taken good care of its employees and its customers. Because money was tight, the customers and salesmen who visited the factory were fed and accommodated by the company for years. For this purpose, a guest house was built next to Martti Kemppi's house, and it became a thing of legend. It was the birthplace of Kemppi hospitality, which is well known to all of Kemppi's stakeholders to this day.

Martti Kemppi's brother Matti Kemppi at his desk.

Production in the 1960s.

In the foreground, the LH 250 welding transformer, which entered the product range in 1960, and the finishing touches on a concrete mixer.

Kemppi's staff at the topping-out ceremony for the Okeroinen factory.

The assembly hall in Finland's largest welding machine factory.
In the foreground, 500 A welding transformers are being manufactured
for use in the shipbuilding industry.

THE GUEST HOUSE

Kemppi's legendary guest house was built in 1967, and it has hosted many a meeting and joyful celebration. The house was demolished in 2012, having fallen into a state of disrepair. The photo shows the guest house before its demolition.

In 2001, the Pro group's Christmas party involved a balancing competition. Pictured from left: Markku Haaparanta, Timo Riihelä, Sauli Metsä, Jouko Sakari Järvinen, Annikki Haaparanta, and Liisa Haikkala.

Author Seppo Jääskeläinen reminisced about the guest house in an article for Kemppi's intranet: "When I worked in production from 1974 to 1994, many meetings, courses, and farewell parties were held in the guest house. The first that I remember was a party to celebrate the retirement of production director Sakari Raevaara in the fall of 1988. 'Saku' had been the production director for just over a year following his terms as CEO and administrative director. He was given a parting gift of a backpack containing tools and 'liquid refreshments.' At the guest house, we enjoyed drinks, went to the sauna, and swam. It was fun!

Director Sakari Raevaara retired on November 30, 1987. He died on December 12, 2008.

Risto Oinonen and Jyrki Sahala.

Risto Oinonen, who worked at Kemppi for a total of 37 years, mainly in sales roles, remembered the guest house from photos from the 1980s. He first joined Kemppi on April 29, 1963, and he made concrete mixers. When he retired on August 31, 2011, he held the position of key account manager at Kemppikoneet Oy.

The visiting day for representatives from machine shops in Kymenlaakso, Finland, included a Kemppi briefing in the factory, information about production and the products, and a discussion about customers' plans. After a quick factory tour, the visitors "needed" to get cleaned up – and have a small meal – before returning home, and the photos are from this event: The hosts were Kemppi Oy's CEO, Jouko Kemppi, and the regional sales manager, Risto Oinonen.

The guests have got their clothes on, and it is clear who is being "celebrated": Risto Oinonen, Jyrki Sahala, Jari Waström, and Lars Broberg.

The visit to Kemppi is almost over, and it is time to go home in good spirits, along with bags of 'refreshments' for the journey. Juho Viinikainen had gone home before the photo was taken: Jari Waström, isäntä Jouko Kemppi, Jyrki Sahala, Harry Rickman, and Lars Broberg.

1970s

From left: Veikko Määttänen, Pauli Suurmunne, Stig Johansson, Petteri Asikainen, Jorma Korkeila, Pentti Santala, and Matti Kemppi in the Christmas spirit near a spot welding machine.

A dynamic decade

"OUR GROWTH POTENTIAL IS NOT BASED ON A BULGING WALLET – IT IS ALL ABOUT KNOWLEDGE AND SKILL, THE ORGANIZATION AND PEOPLE WITH PROFESSIONAL EXPERTISE AND, ABOVE ALL, OPEN-MINDED ENTREPRENEURSHIP. AND THE RESULTS OF ALL THIS ARE ALREADY VISIBLE IN MORE THAN 30 COUNTRIES."

–MARTTI KEMPPI

Years of determined work, long days, and a summer hobby – building a ballasted pier with his own hands and his own stone – caused Martti Kemppi to undergo complicated surgery on his back in 1962. He was 42 at the time.

"I decided I would pass the leadership of the company down into younger hands when I turned 50. And when I needed another operation a few years later, I was certain. When I turned 50, I did exactly what I'd decided to do. There are competent people to share the responsibility," Martti Kemppi says in an interview from the archives.

At the beginning of 1970, Martti handed over the job of CEO to Veikko Suurmunne, who had worked at the company for 17 years. Martti concentrated on his duties as Chairman of the Board. *"To safeguard Kemppi Oy's future and effective management now and in the future, we have asked our current deputy CEO, Veikko Suurmunne, M.Sc. (Tech.), to become Kemppi's CEO as of the start of 1970. He needs no further introduction, as we have got to know him well over his 17 years at the company. The company will be in safe hands. You may wonder why I am doing this. At the very least, Kemppi Oy's CEO needs to have a good head and a healthy back. The second of these qualities I am beginning to lack, and I am not entirely convinced about the first. This is the type of decision that CEOs must make,"* Martti Kemppi said in a speech to the staff. The speech was entitled "Martti Kemppi's Order of the Day."

After Suurmunne, Sakari Raevaara, an engineer, served as CEO from 1977 to 1979.

1972 was a genuine year of celebration. Martti Kemppi received the Finnish honorary title of 'teollisuusneuvos' – and he has generally been referred to as Neuvos since then – and Kemppi was elected Entrepreneur of the Year in Hamina, Finland. The grounds for the award stated that Kemppi had consistently complied with the principle of concentration. *"The expansion of production has taken place in phases as knowledge and experience have been amassed."*

The 1970s were characterized by the construction of the Okeroinen factory area and Martti Kemppi's struggles with the strict repayment schedule.

The expansion projects were crucial for the rapidly developing company. In 1970, the factory was extended to the south. Three years later, the building was extended to the east, and the paint shop was modernized. The paint shop switched from a wet painting method using air sprayers to semi-automatic electrostatic painting.

In 1976, the maintenance premises were improved, and a warehouse was built at the western end of the factory. This was announced in the staff newspaper, Kemppi Uutiset, which was first printed in 1973, as follows: *"As you may have noticed from the excavators moving around the factory, we have started building again. This time, we are building a heated warehouse in the place of the existing cold storage area. The products and raw materials in the cold store will be moved to the new warehouse area, along with most of the materials that are now stored in the factory. When all of the functions affecting incoming and outgoing materials begin taking place in a heated warehouse building, we will finally be able to solve the problem of drafts around the factory's main entrance. Naturally, work in the warehouse will also become more pleasant."*

Kemppi's sales force. From left: The sales manager in Lahti, Kari Lehtinen, the sales manager for the Tampere region, Torsti Tuukkanen, and the sales director, Vesa Ryynänen.

Production expanded rapidly, and the factories in Pekanmäki were taken back on lease in 1979. Activities including the maintenance department, the spare parts sales and warehouse operations, the manufacturing of torches and torch cable, and maintenance of electronic units were transferred to Pekanmäki.

Kemppi broke the 500-employee barrier in 1974. Martti Kemppi continued to tour the factory regularly, as he wanted to know how the staff members were doing. There were so many employees that name badges were introduced at the Okeroinen factory. *"With such a big group of people, it's difficult to know everyone. In particular, some people may have real difficulties remembering everyone's name. For that reason, the decision was taken at a production committee meeting in 1973 to recommend the introduction of name badges to make it easier for us to interact and get to know each other better,"* said the staff newspaper.

Expansion occurred elsewhere in Finland in addition to the factory area. In 1975, Kemppi opened its first site in Turku. The purpose of the site was to sell Kemppi's products and handle other product groups closely related to welding, such as gas welding cylinders, devices, and occupational safety equipment. The new products helped Kemppi to reach out to new customer groups, thereby also increasing sales of its own products.

"*The hammers have swung, the axes chopped, the brushes brushed – and the product is finished. On Hämeentie in the city of Turku, Kemppi has created its first retail business selling directly to users, providing maintenance, and selling spare parts. Field sales personnel also work in the same premises,*" was how the staff newspaper reported the opening.

In the second half of the 1970s, Kemppi enhanced the efficiency of its factory operations and work phases. The factory switched to semi-automation, and the production lines were adapted to make them suitable for mass production. The switch from short-run production to track assembly also required the tools and machinery to be modernized for use in mass production. At the same time, work planning and phasing were made more efficient, and contract pricing was reviewed. IT appeared in the company's administration and sourcing department in the late 1970s.

"THE HAMMERS HAVE SWUNG, THE AXES CHOPPED, THE BRUSHES BRUSHED – AND THE PRODUCT IS FINISHED."

In the 1970s, Kemppi's product policy required products to be efficient, modern, and high in quality. Quality was one of the basic characteristics of a product, and it was as important as the price. *"You can only find buyers for good products,"* Martti Kemppi said.

The staff members were reminded that quality is born of cooperation. A product is only as good as its weakest link, and the company's success on the market depends on everyone's efforts. Instructions and inspections cannot replace meticulousness and responsibility.

Quality was explained in depth, and definitions were drawn up to identify what each department brought to the quality chain. This information was then brought to everyone's attention with the help of the staff newspaper.

***1**. The company's senior management defines the company policy and thereby also the evaluates for products.*
***2**. The marketing department evaluated the dependency between quality and the market price and issues quality-related recommendations.*
***3.** The product design departments and laboratories transform the targets into drawings, internal norms, and inspection and testing instructions.*
***4.** The production department takes care of compliance with the instructions and the requirements of good professional competence when products are manufactured, and it also conducts inspections and tests.*
***5.** The quality control department conducts spot checks and general quality control, both physically and statistically.*

Nowadays, keeping quality at the desired level is one of the key areas on which Kemppi is focusing its efforts. Quality consists of the entire chain, from material selections and product development all the way to device testing and after-sales service.

Demo welding at Kemppi's factory.

Kemppi expanded rapidly. In order to ensure that it could find enough skilled workers, Kemppi began building company apartments for its staff. The first two apartment buildings went up in Okeroinen in 1971. Vacant apartments were listed in the staff newspaper, and employees could apply for them by filling out a form available from the switchboard.

Kemppi also invested in occupational health care for its staff. When occupational health care became a legal requirement, Kemppi Oy, Lahden Lasitehdas, Oilon Oy, and Aaltopalkki Oy joined forces to establish the Okeroinen occupational health care cooperative, which covered almost 1,400 people in its first year.

During the first six months, the health care stations handled the following:

308 accident patients were tended to by a physician and
163 patients were treated by occupational health nurses
507 cases of illness were handled by doctors
971 cases were handled by nurses
113 pre-employment health examinations
27 periodic check-ups
220 basic check-ups
1,469 laboratory examinations
67 people were referred for X-rays
The physician also performed:
45 lung examinations
86 eye pressure examinations
392 hearing examinations
366 eyesight tests

Growth could not have occurred without amazing products. At the start of the 1970s, Kemppi launched new industrial rectifiers that, together with MIG/MAG equipment, established the company's status in Finland and on export markets.

One of the most significant new products of the 1970s was the TYLARC welding rectifier, which was entirely thyristor-controlled. Thyristor control made the welder's work easier. It provided the option of using various electronic accessories and ensured a high-quality weld, even in difficult conditions.

However, the hit product of the 1970s was the MINEKA 130, which was produced in large quantities. Product development engineer Tapani Mäkimaa recalls how Kemppi set out to develop something new and revolutionary in the fall of 1977.

"*The economy was heading into recession, and the factory was operating with a shorter working week. Something needed to be done. At that time, small stick electrode machines were transformers, and their arcs were not particularly stable. Pauli Suurmunne, the sales manager for Finland, stated that we needed to eliminate the 'AC flavor' of the arcs on small machines." The company took a conventional approach to experimentation – a rectifier and a choke coil were connected to the back of the small transformer. The results were not very good. In October that year, Aarre Tuhkanen, who managed the product development laboratory, floated the suggestion of building a small stick electrode machine. It was something new – at that time, only large machines used phase cutting technology. A working desktop model was created in a single weekend, and the development of the product began almost immediately."*

Hilarc was the world's first welding inverter. It is now the standard in the welding sector.

The reason for the MINEKA 130's success was simple: Due to the better technology, the arc was more stable and better to use than with a transformer. MINEKA provided almost the same level of quality as the larger, professional LARC and TYLARC machines.

THE DEVELOPER OF INVERTER TECHNOLOGY

When Tapani Mäkimaa took a summer job at Kemppi in 1970, nobody could have guessed that we could become one of the company's most important employees. He began his long career cutting screws in the warehouse. Martti Kanervisto, the product development director, soon tempted Mäkimaa to leave the electronics department to become a trainee in the product development laboratory. Mäkimaa's first job was to build a testing device to solve problems with an IR diode.

The young man got back to Kanervisto a few days later. Kanervisto thought there had been no progress, as Mäkimaa had not been given many instructions on what type of testing device was required. Quite the opposite. Mäkimaa had already built a functioning tester.

Mäkimaa joined Kemppi after completing his master's degree in engineering, and, over the following few years, his main work involved developing power source technology.

Welding power sources using inverter technology revolutionized the welding industry. Thanks to inverter technology based on frequency transformation, it was possible to make devices significantly lighter and more environmentally friendly. They were also more efficient and versatile.

Kemppi has developed inverter technology since the early 1970's. In the summer of 1977, the company perfected the world's first inverter power source that could be used to weld 2.5–4 mm stick electrodes. After this, the product development department set about investigating how a stick electrode machine could be tamed for use in MIG/MAG welding. Tapani Mäkimaa recalls that it took a few weeks of hard graft, numerous blown fuses, and various bangs and crashes before a MAG arc was ignited on a January evening in 1978. The first Hilarc 250 machines were shipped to customers a year later.

Tapani Mäkimaa is considered the father of inverter technology, but he says that Martti Kanervisto is equally deserving of praise. *"Martti had been in the industry for more than a decade. I was just doing as I was told."*

Tapani Mäkimaa was involved in developing scores of iconic Kemppi products.

In addition to inverter technology, Mäkimaa has been involved in developing scores of iconic Kemppi products.

"My most important tools are my pencils, notebook, and a slide rule from the 1960s. All of the necessary desk work can be handled with these tools," he says, adding that product development must be challenging in order to obtain results – when you are working on something difficult, you really have to think about how to tackle it. The more complex the problem becomes, the more thought it requires.

Mäkimaa possesses substantial know-how on the welding industry, and he has toured the world, giving lectures on the subject. He also created an internal training course for Kemppi's product development department which starts off with the physics of an arc. It is a proper dose of welding and power source technology. *Tapsan tahdit* (Tapani's strokes), as the course became known, is a compulsory part of the training for every employee in Kemppi's product development team.

VEIKKO SUURMUNNE

In summer 1953, Veikko Suurmunne, then an undergraduate, joined Kemppi as a trainee. The following year, he graduated with a master's degree in engineering in wood processing and completed his military service. After this, Martti Kemppi asked him to join Kemppi and design a spot welding machine.

At that point, the company had 11 employees, five of whom were the Kemppi brothers.

Veikko Suurmunne was Martti Kemppi's right-hand man for many years. When Martti Kemppi switched to an oversight role on the Board of Directors, Suurmunne took the reins of the company. He served as Kemppi Oy's CEO from 1970 to 1976.

"We have built this company together for a long time now. His ability to lead the design work and production was combined with my business and administrative skills," Martti Kemppi said of their work together.

Veikko Suurmunne served as Kemppi's CEO from 1970 to 1976.

MARTTI **KANERVISTO**

Engineer Martti Kanervisto joined Kemppi in 1967. His master's thesis at the Helsinki University of Technology covered the topic of controlling an arc using thyristors. He was interested in developing welding, and that is what he was able to do at Kemppi.

There was very little research data, particularly in the early years. Kanervisto's approach to product design was based on customer feedback, which he received from Martti Kemppi and Petteri Asikainen.

The revolutionary inverter technology was largely the work of Martti Kanervisto. He spent most of the 1970s developing welding inverter technology with the product development group he headed. The world's first inverter power source was made in summer 1977.

In 1982, Kanervisto became head of Kemppi Oy's mechanization department, and he later ran the electric device group.

Kempower Oy was established at the end of the 1990s under Martti Kanervisto's management.

Martti Kanervisto presents the Hilarc.

A strategy meeting: top row, from left: Jouko Kemppi, Pekka Peltonen, Tapani Mäkimaa, Martti Kanervisto, Sakari Raevaara, Matti Kemppi, Hannu Toivonen, Antero Pokkinen, and Jarmo Helenius.

Bottom row, from left: Jorma Korkeila, Pekka Rantalainen, Lauri Kärävä, Torsti Tuukkanen, Matti Sirén, and Kari Räsänen.

But the most successful product was still to come. Kemppi's welding laboratory spent the 1970s developing the inverter power source. "Welding inverter" was the name chosen by Kemppi to describe a welding power source realized using frequency transformer technology. The technology was based on raising the internal frequency of the machine by several multiples of the supply frequency. Inverter technology enabled machines to be made to cater for three welding methods. The same power source could be used to weld with stick electrodes and to carry out MIG/MAG and TIG welding.

Kemppi presented a prototype of the world's first mass-produced welding inverter at the Essen fair in 1977. A year later, the prototype had been transformed into a finished product, and customers were able to see it at a technology trade fair in Stockholm. The Hilarc 250 stole the show and became the focal point of the fair. The Hilarc 250 multi-purpose power source based on inverter technology established a new baseline for the industry as a whole. Inverter technology enabled lighter, more energy-efficient, and more versatile power sources.

Martti Kanervisto's product development group included Hannu Pulli, Kauko Pylväs, Hannu Toivonen, Tapani Mäkimaa, and others besides.

The business was increasingly driven by exports throughout the 1970s, and exports exceeded domestic sales in 1978. A dedicated export department was set up at Kemppi, and domestic and export sales were separated from each other. Marketing was involved in analyzing new markets and new customer target groups in more depth. Focal areas were defined, targets were set, and action plans were drawn up for marketing.

The first subsidiary was established in Sweden in 1972. In the same year, Kemppi also opened a subsidiary in the United Kingdom, but this would be closed down a few years later. A subsidiary was again opened in the country in 1980.

In the early years, the CEO of the Swedish subsidiary, Nordsvets-Kemppi Ab, was Henry Lundström. Jouko Kemppi took the reins at the subsidiary in 1977, and he stayed there until the end of 1979. During Jouko Kemppi's period at the helm, Kemppi strengthened its brand in Sweden, and the subsidiary's revenues increased to 25.4 million kronor. A dedicated direct sales organization was created in Sweden, and regional distributors were acquired. The distributors also operated as service points for Kemppi products. The subsidiary was later renamed Kemppi-Sverige Ab.

"WE HAVE BEEN SO SUCCESSFUL THAT COPIES OF KEMPPI WELDING MACHINES ARE CURRENTLY BEING MANUFACTURED UNDER MANY DIFFERENT NAMES ALL OVER THE WORLD."

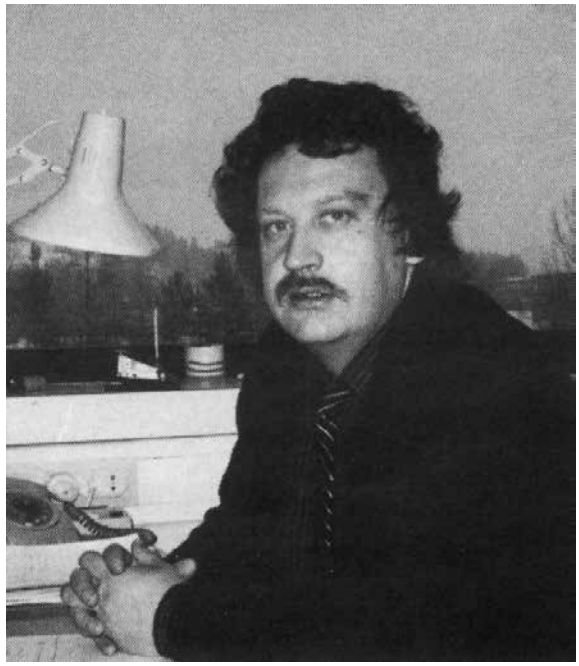
At this point, Kemppi was still operating with representatives in the other Nordic countries. At the beginning of the decade, Kemppi also took on sales representatives in Chile.

Kemppi used other methods besides subsidiaries and sales representatives to internationalize. In the 1970s, licenses to manufacture Kemppi products were sold in West Germany and Spain, among other countries.

"*It is nicer to sell something in an envelope than a packing case. You don't even have to pay customs duties on know-how,*" Martti Kemppi said in an interview.

"*We have been so successful that copies of Kemppi welding machines are currently being manufactured under many different names all over the world. However, they are already outdated when they are made because the copier always lags behind,*" added the CEO, Suurmunne, in the same interview. Kemppi's machines were the best in the industry at the time.

On a very hot Saturday in 1976, Kemppi made a supply agreement with Ferimport, a foreign trade organization in Havana, Cuba. Competitors from Japan and the U.K. had put up a tough fight in the negotiations, but the quality of Kemppi's machines won the day. Kemppi had supplied a fairly small batch of transformers and rectifiers to Cuba before then.



Hannu Toivonen, an engineer,
productized the first inverter machines.

Advert from the 1970s.
"Evolution of welding technology:
Tylarc, hard to beat today.
Hilarc, top-notch still tomorrow."

Demonstrator
vehicles
in Okeroinen

"A supply agreement has been signed following a hard-fought and unusual commercial competition. The machines will be located in various different places around the island of Cuba," wrote Rainer Björklund, the marketing director, in the staff newspaper.

Kemppi solidified its position in Central Europe thanks to its MIG/MAG devices and industrial rectifiers. There was even a representative in West Germany, which was a superpower in welding products. Metex provided Kemppi with a foothold in the Polish, Hungarian, and Czechoslovakian markets.

Outside Scandinavia, sales were made with the help of carefully selected representatives. A separate strategy was drawn up to control the entry into every new export market, as each country had different needs in terms of maintenance capabilities and training. It was often necessary to make adaptations to specific products according to customers' wishes.

Network management has always been one of Kemppi's strengths. From the outset, the company has worked closely with its sales representatives. This has provided the company with a better understanding of local markets.

The representatives were trained at the Okeroinen factory. They were able to see where and how the machines were manufactured. It was also a good opportunity for the representatives to meet the sales staff.

Kemppi also invested in training its staff in addition to the sales representatives. This was partly because there were no vocational programs for welding in the Lahti area. Education has also always been respected at Kemppi. In Martti Kemppi's opinion, education was vital for success. Particularly as he had only been through *"folk school, confirmation classes at church, a little vocational school, and five years of war."*

Once Kemppi became established in Western markets, it sought growth in the east. Lauri Kärävä, the son of attorney Teemu Kärävä, played a significant role in this. When Hannu Kemppi called his friend in the late 1970s and asked him to join Kemppi, Lauri Kärävä was working at VTT. His duties included inspecting the construction site of the nuclear power plant in Loviisa, and this had helped him build up contacts in the Soviet Union. This led to the idea of exporting to Finland's eastern neighbor.

Under Lauri Kärävä's management, Kemppi began exporting to the Soviet Union in earnest in 1979. At that time, a state procurement committee coordinated all of the purchases into the Soviet Union from abroad. This meant that a single deal involved selling about 50 times as many machines as an export deal to a Western country. However, the Soviets were highly aware of price and quality, so eastern exports were by no means easy, despite the large volumes.

Kemppi mainly supplied machines for the shipbuilding, heavy-duty machine workshop, oil and petrochemical, and automotive industries. Kemppi developed a separate welding machine model for the Soviet Union market.

In addition to commercial relations, Kemppi had several technical scientific and commercial projects with Soviet organizations.

In the 1980s, Kemppi spent the money it had earned trading with the Soviet Union on building a strong network of subsidiaries around the world.

At the end of the decade, Kemppi's production lines produced approximately 20,000 devices annually, and exports accounted for 60 percent of sales.

The green machines had been consigned to history, giving way to an orange and black color scheme. The same colors were used in other marketing material, both in Finland and abroad.

FACTS:

Kemppi's products in the 1970s

UFO, TOP, and TRAN transformers
MINEKA and TYLARC rectifiers
RA/LISA and KEMPOMAT MIG welding machines
MARC multi-purpose machines
LHF large-run device
HILARC inverters

DIVERSE KALKKINEN

In 1973, Martti Kemppi acquired a dilapidated farm named Uusikartano in the village of Kalkkinen. He immediately set about renovating the buildings in the grounds of the house, and the premises served as Kemppien Teollisuus Oy's production facilities.

No welding took place in the first few years in Kalkkinen: the business focused on reinforced plastic. In the early stages, plastic parts for Kemppi's LMP welding torches were manufactured in the barn. Manufacturing was soon outsourced to a subcontractor and, in summer 1976, the premises in Kalkkinen began churning out fiberglass boats once Veli-Matti Kilpinen, a technician with expertise in the field, joined the company. For a short while, plastic furniture, ice fishing containers, and manhole covers were made for customers including Uponor.

Kemppi began manufacturing welding torches in Kalkkinen in 1982. When production ramped up, the factory produced welding cables, plastic-framed remote controls, and welding torches. The work was weighted towards manual craftsmanship and, at its peak, the factory employed about 60 assemblers.

The Kalkkinen factory was closed in spring 2016, and production was moved to Lahti. There were many reasons for the closure. The company wanted manufacturing activities to be closer to product development, the population of the village was growing older, and it was difficult to recruit new experts. It also took time to transport products from Kalkkinen to Lahti.

This was not the first time that the Kalkkinen operation had been threatened with closure. It was critically assessed at regular intervals, but the family supported the place that was so dear to Martti Kemppi and the unique atmosphere of the Kalkkinen factory for as long as it was rational to do so.

"*We were able to offer the employees much more pleasant working conditions and opportunities for development in the Lahti factory,*" Teresa Kemppi-Vasama emphasizes.

In addition to the welding torch factory, many other activities were undertaken at the Kalkkinen manor house. In the early year, the on-site drying house was used to dry grain in the evenings and at night. Turnip rape and hay were grown in the manor house's fields. The work in the spring and the fall involved sowing the seeds, harvesting the crops, and threshing the plants. Kemppitalli, Finland's largest racehorse stud, also operated in Kalkkinen for many years. At its peak, it had about ten stallions, and they covered up to 500 mares per year. Kemppitalli is now owned by Kimmo Kemppi.

TORCH MANUFACTURING FROM THE 1960S ONWARDS

Kemppi has a long history of torch manufacturing. The design and production of welding guns began at the Pekanmäki factory in the 1960s. In 1967, these activities were moved to the new Okeroinen factory before returning to Pekanmäki in 1979.

In 1982, the production of welding torches was transferred to Kalkkinen in Asikkala. Initially, plastic components were made for LMP welding torches in Kalkkinen, but the production of these parts was soon outsourced to a subcontractor. Kemppi continued manufacturing welding torches, plastic-framed remote controls, and welding cables in Kalkkinen until 2016. That was when Kemppi decided to invest in developing and manufacturing its own torches, and production was moved back to the Okeroinen factory from Kalkkinen.

Kemppi stepped up its investments in torches by opening a torch factory in Wuxi, China in November 2018. Kemppi already had an efficient network of component suppliers in China, so by moving its manufacturing activities closer to the technical network, the company was able to boost the competitiveness of its torches and welding guns, particularly on aftermarket.

In spring 2019, Kemppi further enhanced its torch manufacturing expertise by acquiring Trafimet, a torch manufacturer based in Italy. Thanks to the acquisition, Kemppi gained a well-known brand, an extensive product selection, and a knowledge center for the aftermarket business. In addition to torches, Trafimet manufactures accessories, such as electrode holders, connectors, intermediate cables, and various welding safety gear.

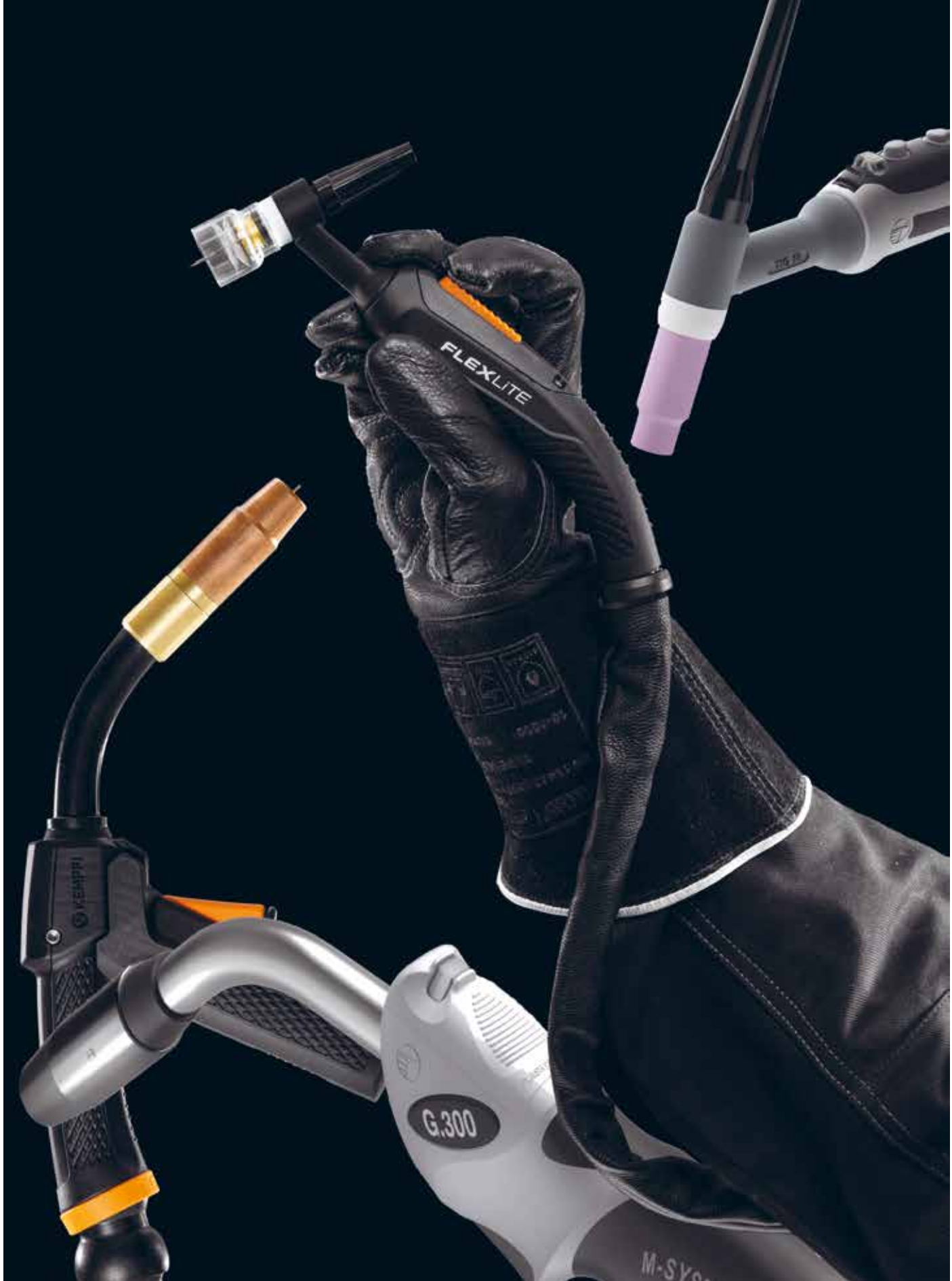
Kemppi has invested in developing torches as well as manufacturing them. The "Torch Group," which was responsible for developing torches, was run by Olli Hämäläinen at the Okeroinen factory from the end of the 1980s until the mid-1990s. Torch design is nowadays part of Kemppi's mechanical development organization, and the manager in charge of developing welding torches is Jani Hämäläinen, who is responsible for mechanical development.

It is important for torches to be light, ergonomic, and functional in various welding positions, as the welding torch is an extension of the welder's arm. It is said that the features of the welding torch have a decisive impact on the overall quality of the weld, allowing every welder's personal style to shine through.

Welding torches also contain many small consumable parts, and the durability and quality of these play an important role in industry. Tools need to be long-lasting and work flawlessly, even under heavy use.

The importance of the design, ergonomics, and usability of welding guns was highlighted in 1993 when the PMT welding guns were introduced. Kemppi began developing its own series of TIG torches at the same time.

The Flexlite torch range, launched in 2019, takes ergonomics and comfort to a new level. The first welding gun in the range was announced in conjunction with the X8 MIG Welder system. The same advanced ergonomics and usability will also be introduced for TIG and MIG welding.


FLEXLITE
G.300

The staff newspaper, which was published several times a year, was first made in 1973 under the name "Kempin uutiset" ("Kemppi news"). In 1980, it was renamed "Kemppiläinen" ("Kemppi employee"). The newspaper carried a diverse range of articles, ranging from company news and staff activities to staff relations, family life, social policy, and psychology.

The portable Kemppi machine of the 1970s.

Veikko Määttänen, Jussi Kapulainen, and Rainer Björklund presenting the hit products of the 1970s.

Rainer Björklund was responsible for Kemppi's marketing in the 1970s.

Pictured from left: Erkki Lötjönen, Martti Kanervisto, Raine Björklund, and Sakari Raevaara.

1980s

Production in the 1980s.

A decade of internationalization

IN THE 1980S, KEMPPI CHOSE TO FOCUS ON DEVELOPING ITS QUALITY POLICY, REPLANNING EXPORTS, AND RETAINING ITS LEADING POSITION IN ELECTRIC WELDING, WHILE DEVELOPING PRODUCTS WITH NEW TECHNOLOGIES.

1979 and 1980 were hectic years. The number of unemployed people in Finland fell below 100,000 and, in 1979, the country's gross domestic product was the highest of all OECD countries.

By the end of 1980, the boom had come to an end, and inflation ran wild at a rate of 11–13 percent. The balance of payments on Finland's current account was showing a large deficit, and the paper, sawmill, and forestry industries switched to a shorter working week.

Jouko Kemppi, who became CEO in 1980, wrote in the last staff newspaper of the year that the metal industry was still in a satisfactory state, although there had been a sharp decline in the number of new orders. Despite the gloomy outlook, Kemppi Oy began the new year with higher expectations than many other companies as its exports had held up.

Kemppi expanded rapidly in the early 1980s, mainly thanks to export markets. Kemppi's good results in Sweden encouraged it to establish new sales companies. The only question was how the company should seek progress: should it expand its network of sales representatives or open new subsidiaries? Both options had their pros and cons. The company gave thorough consideration to the question and ultimately opted to establish new subsidiaries in its quest for growth.

"*Market information was the decisive factor. Subsidiaries provide the headquarters with precise knowledge of what is happening in the market, which types of welding are needed, and what the customers are looking for. The subsidiary also provided us with an extensive distribution network in the export country,*" recalls Hannu Jokela, the sales director. He was responsible for non-European countries in the 1980s.

Hannu Kemppi traveled the world with Markus Troberg, a lawyer, building up a network of subsidiaries. Kemppi U.K. Ltd began operating in Bedford at the beginning of 1980. Soon after, a subsidiary was opened in Norway. Kemppi Norge A/S was located in Drammen, about 30 kilometers (18 miles) from Oslo. The company initially employed 11 people and had a distribution and maintenance network covering the length and breadth of the country. Kemppi's operations steadily expanded in Norway, and it quickly assumed a robust position on the country's welding market. The success story was spurred by the expert staff at the Norwegian subsidiary combined with Kemppi's reliable products, which were ideally suited to the shipyard industry.

The implementation of the subsidiary policy continued in 1984 when Kemppi B.V. was established in Woerden, the Netherlands.

The company had long been interested in the French welding market, as it was Europe's second-largest behind West Germany. Before the subsidiary was set up, Kemppi's Kempomats, which were mainly designed for car repair shops, had been sold in the country via a company named Dube. There was no representative for industrial machines in the country. Kemppi was stirred into action to establish Kemppi France when Dube went bankrupt. Kemppi's fifth subsidiary, Kemppi S.A., began operating on October 1, 1984 in Paris, France.

In the mid-1980s, subsidiaries were opened in West Germany, Belgium, and Denmark. The companies in the Netherlands and Belgium were merged at the end of the decade to form Benelux B.V., which was based in the Netherlands. Following the break-up of the Eastern Bloc, representation was established in Poland, followed in the 1990s by a dedicated subsidiary.

Kemppi's export markets expanded across the seven seas to the United States, the Middle East, the Far East, and Australia, and from there to New Zealand. From the outset, Kemppi was considered an advanced, high-quality manufacturer in the Australian market, and Kemppi's inverters quickly took a leading position. To this day, the Australian mining industry remains an important customer group for Kemppi.

Exports grew throughout the 1980s, and the best results were achieved in the countries where subsidiaries handled marketing. Their strengths in comparison with importers were quick deliveries, good maintenance, expertise on Kemppi products, and a more extensive range of products. Importers were trusted in unfamiliar countries where it would not be profitable to establish subsidiaries.

It was important to have direct contact with users. This was often the decisive factor in sealing deals and, for this reason, travel was a necessary evil of the exporter's work. In an old interview, Kauko Pylväs, who worked on exports, said that the working days easily stretched to 16 hours when the morning began with negotiations, and the evening ended with a flight to the next location.

"*It is nice to sell good products. Kemppi had an image of high quality around the world. When you believe in the machine, you need to let others know.*"

The subsidiaries enabled Kemppi to market about 50 percent of the products it manufactured. The remainder was marketed by foreign representatives.

Trade with the Soviet Union continued to grow steadily. In addition to oil and gas pipelines, the country's shipbuilding and metal industries needed a large amount of welding, but the machines were the problem. The Soviet Union had no machines that could be used to weld the thick aluminum used in shipbuilding to a good enough standard. When Soviet experts began scouring the market for suitable machines, they discovered Kemppi's Marc 500 HF machines. Kemppi stood for quality, and the fact that Finland and the Soviet Union were neighbors made it easier to work together. Since then, the country's shipping industry has mainly used Kemppi devices.

The Kempomat MIG machine became a byword in Soviet times, and the word "Kemppi" it is still synonymous with MIG welding in Russia today. Nowadays, the country's best-selling MIG machine is the FastMig M series, which holds a substantial market share.

Kemppi also has numerous long-term relationships with distributors in the country. Sergey Vasiliev from PKF OTS LLC and Aleksandr Ardashnikov from TSTS Vyborg LLC both began working as Kemppi distributors in 1991, following the collapse of the Soviet Union. Both men remember when Kemppi opened a service workshop in Vyborg in 1985.

Vyborg was chosen as the location for several reasons, not least because a large number of Kemppi machines were used by shipyards along the Baltic coast. Kemppi delivered the latest test devices and a warehouse of spare parts to Vyborg, and it trained the local staff to maintain the thousands of Kemppi devices in the country. Customers visited the service center to buy devices, spare parts, and services, ranging from repairs to maintenance.

Customers in Chile had also taken note of Kemppi's high-quality machines, and the company embarked on a long period of collaboration with Indura Chile in the 1980s. At the end of the decade, Kemppi made its first deliveries to China.

The number of trade fairs increased along with the number of new market areas as foreign marketing was largely based on presentations at exhibitions and trade fairs.

The rapid growth in exports had also been noticed in Lahti. Päijät-Hämeen Säästöpankki, a local bank, awarded Kemppi the title of Exporter of the Year in 1986. The award was due to factors such as the company's early internationalization, the large and constantly increasing share of production being exported, the large number of market areas, strong specialization and expertise, and the standard of product development.

In an editorial for the staff newspaper, Sakari Raevaara announced that 1982 would be the year of quality. "*It is not enough that Kemppi's machines have good welding characteristics. The machines also need to be durable and easy to service. The service systems need to be in good order, and spare parts must always be available. All of this creates the image of Kemppi quality, and only when this reaches the required standard we will be set for a successful future.*"

Kemppi initiated a quality management project with the aim of creating a comprehensive quality control system. The company also aimed to be a pioneer in this area, so it sought information from all over the world. Professor Noriaki Kano, a quality guru from Japan, visited Kemppi's factories twice to teach the staff about quality control.

Over the following years, a quality management department was set up at Kemppi, and the company created a quality policy and quality ground rules, which were implemented in every function and in the

KEMPPI B.V.
HOLLANTI

Hollannin myyntikonttori Kemppi B.V. aloitti toimintansa 1.1.84 Wordenissa. Toiminnasta vastaa vientipäällikkö Kauko Pylväs.

Kemppi B.V:n henkilökunta

Kuvassa vasemmalta: Steve Iprenburg — huoltoinsinööri, Tony Gerrits — toimistopäällikkö, Piet de Bruin — hitsausneuvoja/Länsi- ja Etelä-Hollanti, Gerrit Eilander — myyntipäällikkö, Gerrit Flim — hitsausneuvoja/Pohjois- ja Itä-Hollanti.

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The network of subsidiaries expanded in the 1980s. The first subsidiaries were established in the U.K. in 1980, Norway in 1981, and the Netherlands and France in 1984. After that, Kemppi opened a subsidiary every year, beginning in West Germany, before moving on to the U.S.A., Belgium, and Denmark. The companies in the Netherlands and Belgium were merged at the end of the 1980s to form Benelux B.V.

Kemppi's sign being attached to the exterior wall of a building to signal the presence of the new subsidiary in Denmark in 1988.

A STRONG NETWORK OF **SUBSIDIARIES**

Nowadays, Kemppi employees in Finland, Australia, China, Sweden, and India all belong to the same Kemppi Group, but this was not the case in the 1970s and 1980s. Of course, they belonged to the same group of companies at the time, but in the early decades, the leaders of the subsidiaries were different and somehow exotic. For example, when staff from a subsidiary came to Finland to visit the headquarters, the flag was flown at the factory and the guests were treated like royalty.

"We still take good care of our subsidiaries, but they are now part of Kemppi, and the people who work there are Kemppi employees," says Teresa Kemppi-Vasama.

Over the decades, understanding of the markets has improved, and the group has learned to listen to its subsidiaries in a new way. They house a huge amount of expertise that can also be put to use.

everyday work of all Kemppi staff.

Quality-related matters were covered in almost every edition of the staff newspaper throughout the 1980s, accompanied by the message that quality is everyone's concern. The staff members were also trained to understand and make quality – at best, the company had more than 50 quality-related training events in a year. The company built a public quality reporting system, where faults were available for everyone to see, and quality management campaigns were held in-house under the name *The next work phase is the customer*.

The "zero fault campaign" launched by engineer Eero E. Karjalainen was highlighted in the local media as an example of good quality management work. According to Karjalainen, accepting even a single fault could easily lead to an undesirable chain reaction. For this reason, the permitted number of faults was zero.

"Nobody needs to do faulty work. If you think that the quality of the work done in the phase before yours is not up to the standards in the quality handbook, you can refuse to work on it. Down tools, and the foreman will soon come to see you, as well as someone from product development," Jouko Kemppi said in an old interview.

According to the quality policy, all measures should be taken to avoid faults. If a fault occurred, it should be approached with curiosity. Was it due to faulty drawings or bad tools, or was it down to careless work?

"At some point in the 1990s, we calculated that one fault costs at least EUR 500 plus all the phone calls back and forth and the damage to our reputation. Stopping faults in production is extremely valuable."

The company's long-term work to improve quality was also noted nationwide, and the Finnish Quality Association awarded Kemppi the Quality Prize in 1986 for adopting and distributing quality-related information in-house and with external parties.

While the company's quality was being improved, its operations as a whole were under development. On October 13, 1981 the company signed a contract for a large-scale extension to the factory. The extension consisted of a warehouse hall, air-raid shelters for about 300 staff, and modern staff rooms. The total floor area of the extension was approximately 4,000 square meters (43,000 square feet), and the required investment was four million Finnish marks.

"STOPPING FAULTS IN PRODUCTION IS EXTREMELY VALUABLE."

The first phase of Kemppi's development plan, which was launched in 1981, consisted of a highly automated sheet metal working line, a welding line operating on the production cell principle with the aim of improving working conditions, an extension and reorganization of the paint shop, and an assembly system that took account of the product entity.

The second phase of the plan covered the complete modernization of the electronics department, the development of manufacturing technologies for transformers and various semi-finished products, and improvements to the warehousing and logistics functions.

The requirements for greater efficiency and a better working environment also led to the mechanization of welding, and Kemppi decided to build a dedicated mechanization factory in Okeroinen. Mechanizing welding means that the manual movement of the welding gun is replaced by machine movements of the welding gun or workpiece.

Mechanizing welding yields efficiency and quality benefits. Mechanized welding is capable of preventing radiation from the arc and the detrimental effects of welding fumes, and the tiresome and tedious task of moving the welding gun can be replaced by automatic movement. Better efficiency is achieved when long, large grooves need to be welded or when items need to be made in large quantities. Mechanized welding also influences quality, as machines weld at a stable standard of quality.

The time, technology, and markets were not right for the mechanization of welding, and Kemppi abandoned its mechanization products at the beginning of the 1990s, selling them to Jarmo Helenius, Kemppi's product development engineer.

Kemppi presented new mechanization devices at the EuroBLECH trade fair in 2015.

THE FINISHING TOUCH OF QUALITY

As Kemppi's brand is based on the products made in its factory being the best in the world, special attention is paid to quality. A quality mindset begins on the drawing board with material selections and ends with testing and the quality control certificate received as a result.

Until the end of the 1980s, Kemppi made welding devices in work phases: The first person started the work, the second carried it on, and the third put the finishing touches on it. At the dawn of the new decade, the company sought to minimize the risk of human error in assembly, and the quality philosophy and production method were adjusted.

The company switched from subassembly to complete assembly, where a single person assembles a device from start to finish and ultimately puts their signature on the quality control certificate. Under the new quality mindset, everyone was responsible for their actions.

After assembly, the device is tested and calibrated. Testing ensures that the machine is safe and that it works as designed. Only after this can it be sent to the customer with a quality certificate.

Previously, testing was done by a person. He checked that the gauges were indicating the right values and wrote them on the checklist. Nowadays, a computer program handles the testing. The tester interprets the results of the test and ensures that they are as they should be.

The machine measures several parameters at the same time more quickly, efficiently, and reliably than a person ever could. The information goes straight into the database, where it can be easily retrieved if needed. When the testing is complete, the tester signs the quality certificate.

The quality certificate is evidence that the machine has been tested. It can enable the machine's assembly and testing data to be accessed years down the line if any problems arise with the welding equipment.

Väinö Kuusela assembles a Kemppi machine.

The factory got its first taste of automation when the TRUMATIC 180W automatic die-cutting unit heralded a new era in metalwork in Okeroinen in 1980.

The new sheet metal working line had been years in preparation, and company representatives had visited various manufacturers in several European countries to learn about how such lines work. The best machine was found in Germany. *The TRUMATIC is worth more,* said an old brochure. The automation unit also required new planning and programming. Martti's nephew, Kari Kemppi, was hired to do this.

The company also automated other phases of manufacturing. For example, the company began making casing components on assembly runs instead of mass production – the lead time decreased from three weeks to one week. Automation also facilitated quality development, as a machine made items with a steady standard of quality.

Kemppi established a construction laboratory to develop manufacturing technology for its work methods and products. The intention was to ensure that products were production-friendly. This meant delving into the work methods and tools used for old and new products and examining what could be left out or done differently in order to minimize the time spent working and accelerate the production lead time.

"Searching for the least expensive method requires alternative solutions to be investigated. The aim is to eliminate unnecessary steps from the work duty, as well as difficult and burdensome work phases. A further aim is to ensure that the quality level remains high in the actual production series," said an article about the laboratory in the staff newspaper.

An instrument laboratory for testing operations was later established alongside the construction laboratory.

"At the peak, the inverter power sources at the time underwent several hundred tests. Everything was done manually, and one device could take as long as an hour to test," recalls Kari Kemppi, who managed the production technology department at the time. He decided to accelerate the process and develop a dedicated data network for Kemppi.

Computer processors and displays were installed at Kemppi's testing stations and connected to each other by a ring network. Kari Kemppi employed existing technologies, and he and his team built a ring network between the stations. A total of eight new testing stations were built. The main station was in the instrument laboratory, and it collated the testing data on all of the tested products. It also held the centralized collection of testing programs, which were loaded onto the testing station. These worked so well that they remained in use until the 2000s when they were replaced by modern computers.

In 1983, a production planning department was set up to plan work. The Kemppi-Terttu enterprise resource planning system designed for Kemppi was deployed in 1985.

However, the secret to Kemppi's constant success is its groundbreaking products. Under Martti Kanervisto's leadership, the company developed a second-generation inverter, the PS 3500, which was presented at the Schweissen und Schneiden trade fair in Essen, Germany in 1981. The MULTISYSTEM welding system, which was particularly suitable for industrial use, was unveiled at the same trade fair in 1985. It was a system of devices consisting of several components built around a multi-functional power source where the user could select the most suitable devices and methods for the task at hand. The key benefits of the system were the stepless regulation of current and voltage, remote control, and ease of use for pulse MIG/MAG welding.

The Essen trade fair confirmed that Kemppi had made the right product development decisions for international markets, and the MULTISYSTEM was the cornerstone of Kemppi's product range for more than a decade.

In 1982, Kemppi donated a MULTISYSTEM to VTT for use in researching welding mechanization and automation. VTT used the machine to study welding automation for large items, among other things.

Kemppi also took an open-minded approach to developing the MINISYSTEM based on power source technology from the PS series. The MULTISYSTEM was well suited to large plants, while the MINISYSTEM was ideal for installation sites, small machine workshops, and agricultural and hobbyist users.

In September 1986, Kemppi revealed the world's first multi-functional welding machine operating on AC and DC current, the PSS 5000.

At the end of the 1980s, Hannu Toivonen took over the management of product development, and the

product development department hired around 15 new engineers over the course of two years.

Functions were also stripped back in the 1980s. In 1972, Kemppi had acquired Aaltopalkki Oy, a company manufacturing corrugated web beams, glue-laminated timber beams, and prefabricated elements for industrial halls. The company was based in the village of Herrala. However, its business was not profitable. In the mid-1970s, its operations were reorganized to focus on house production, and the company's name was changed to Herrala-Talot Oy (Herrala Houses, Inc.). The first Herrala house was erected in Tavastia, Finland in August 1975.

Hannu Kemppi became CEO of Herrala-Talot at Christmas 1977, got the company into salable condition, and sold it to Teknowood Oy in 1981. The production space freed up by the sale was used to manufacture welding torches, plastic-framed remote controls, and welding cables.

The next stage in the development of the Okeroinen factory was the layout plan, which began in spring 1986. The plan focused on reducing the lead time, increasing productivity, and boosting employees' job satisfaction.

The new assembly area was altered so that it no longer contained storage shelves. Instead, every component had a dedicated place at the work point. This made the work area more open and removed obstructions. In addition, the materials needed to assemble products were always within reach at the work point. This also improved the ergonomics, an area that was receiving greater attention. The assembly system returned to where it had begun in the 1940s – one man built a machine from start to finish.

At the turn of the decade, Kemppi was doing well. More than 70 percent of the company's revenues were from exports, while in Finland, it had achieved a market share of 48 percent in standard machines for electric welding and welding supplies.

Production expanded, and Kemppi – like many other companies – found it difficult to recruit additional workers. Members of the staff had many other special abilities, such as drawing comics. At the initiative of HR director Eija Vartiainen, the company even began seeking new employees using comic strips. Kemppi was also the first company from Lahti to use local radio for recruitment purposes.

The company entered the 1990s in positive spirits.

FACTS:

1980 Jouko Kemppi became CEO.
1980 Inverter technology revolutionized the welding industry.
1981 Aaltopalkki (Herrala-Talot Oy) was sold.
1982 Production of welding torches, plastic-framed remote controls, and welding cables transferred from Pekanmäki to Kalkkinen.
1982 MULTISYSTEM donated to VTT to help in studying welding automation for large items.
1985 Service point established in Vyborg.
1985 Multisystem launched.
1986 Kemppi receives a quality award from the Finnish Quality Association.
1986 The metal factory is moved to the Herrala site.
1986 70% of revenues from exports, market share in Finland: 48%.
1989 Production in Vääksy at the end of the 1980s and start of the 1990s.

VÄÄKSY FACTORY

By the end of the 1980s, Kemppi had become the world's largest manufacturer of inverter power sources. Inverter production already accounted for more than half of the company's power source volumes, and the proportion was increasing all the time. However, line commutated power sources could not be ignored as their volumes were also increasing.

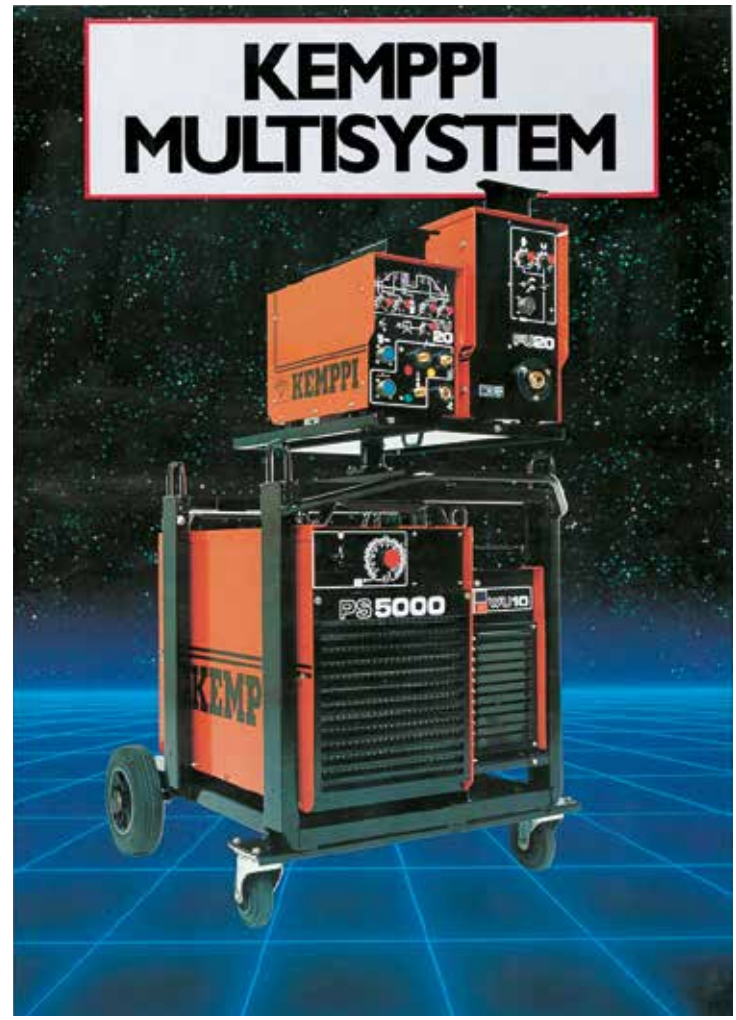
Kemppi decided to establish separate factories for the different technologies. This would enable both units to focus on developing their areas of expertise.

The Vääksy assembly plan came online in spring 1989. The plant manufactured Kempomat, RA, and Tylarc products. Inverter power sources and components, such as transformers, choke coils, and casings, continued to be made at the factories in Okeroinen and Herrala.

Why move to Vääksy? Things were going well in Finland and Lahti, and it proved impossible to hire new employees in Lahti, no matter how hard Kemppi tried. Hannu Kemppi traveled all over Eastern Finland, looking for a suitable location, and he eventually found an appropriate factory building in Vääksy. A professionally skilled workforce was also available in the area, and housing was available in the municipality. In addition, Vääksy was not far from Lahti, and Kemppi already had industrial activities in Kalkkinen, Asikkala.

The Vääksy factory operated for two-and-a-half years and, at its peak, it employed about 30 people. In 1991, a separate factory was no longer necessary, as the Soviet Union had collapsed and trade with Finland's eastern neighbor dried up.

Essen trade fair 1989. The Multisystem PSS devices were new products, and Kemppi was celebrating 40 years in business.



The world's first multi-functional welding machine operating on AC and DC current, the PSS 5000.

KEMPPI **ORANGE**

Kemppi's orange is already a concept in itself, but the company's first machines were not actually orange: They were gray or gray-green, and some were beige. The company began using orange for its machines in the 1960s, and the combination of orange and black finally replaced all other color schemes in the 1980s.

The shade of orange has varied over the years from red-orange to a sun-bleached orange. Nowadays, it is a precisely-defined shade used on every machine, item of workwear, helmet, and advertising material from Finland to Australia and from the U.K. to China.

Where did the color originate? One story goes that the red-orange and black color scheme used in the early years came from the coat of arms of Karelia, where Martti Kemppi was born. The alternative story is nowhere near as interesting; it is practical and relates to product safety. The machines were moved around on frames and by crane in machine workshops. Instead of the gray and green coloring, the machines needed a color that would be easier for the crane operator to distinguish on the floor of a production area. Orange was chosen, and it was probably one of the choices put forward by the advertising department.

The orange color is a part of Kemppi's identity. It is such a big part that when the product development team proposed changing the color of the new FastMig X from orange to black, it met with some resistance. It turned out to be a long process requiring several meetings and justification from the design team. The proposal was accepted, and the new flagship products stand out from the company's other products for their design as well as for their coloring. Kemppi's design manager, Jari Kettunen, thinks that the black product range has not reduced the value of the brand color – if anything, it has raised the value.

"*The new products use orange to highlight important things. The color highlights matters related to functionality and usability. For example, the orange color on the handle informs the user to lift here. The black accentuates the orange,*" Kettunen says.

EUROPEAN KEMPPI

Kemppi's domination of Europe began in earnest when the U.K. subsidiary was reopened in 1980. This was the first in a succession of new subsidiaries, as Kemppi sought a stronger foothold in Central European markets, and this could not be achieved from Finland.

"*In the 1980s, Finland was not yet an E.U. member. A strong network of subsidiaries was one way of being present in Europe. And when Finland joined the E.U., we were already established there. This made it easier for us to operate,*" says Hannu Jokela, a director.

Local industry professionals were hired to run the subsidiaries and conduct marketing. This ensured that Kemppi had the best possible local knowledge and insight into how the market should be approached.

At that time, communications between headquarters and the constantly expanding network of subsidiaries were mainly handled by fax and phone. In order to implement the Kemppi way of working all over Europe, a presence was required. Export manager Kauko Pylväs traveled around Europe, first recruiting people and then helping the subsidiaries to get started.

"*Establishing the subsidiaries increased sales. We got to see for ourselves what the markets were like and what types of customers were in each country. Previously, we had received this information from distributors. We also obtained valuable information on what types of devices were needed in each market, and we were able to develop the desired devices,*" Jokela says.

The German company moved from Friedrichsdorf to Butzbach in 1991, and a warehouse was built next to it to serve the European subsidiaries and distributors. Until then, every subsidiary had maintained its own warehouse. The centralized warehouse improved the availability of products and reduced delivery times. This reinforced Kemppi's position.

Although the warehouse was moved to Finland in 2007, one of Kemppi's strengths in Europe remains its rapid delivery times.

Kemppi's trade fair booth in Sweden in the 1980s

Kemppi's domination of Europe was led under the same pioneering spirit as everything the company has done. Kemppi went to a country, set up a subsidiary, and trusted itself to succeed. Its competitive advantage was its inverter-based machines.

"Kemppi represented high-tech. We launched something our competitors did not have."

In addition to the subsidiaries, a strong network of distributors was also created in Europe in the 1980s to serve customers large and small.

Kemppi strengthened its position in Europe in spring 2019 by acquiring Trafimet Group, a welding torch manufacturer based in Italy.

Europe is still Kemppi's most important market area. Europe accounts for 70 percent of Kemppi's exports.

LAURI KÄRÄVÄ

KEMPPI'S SUCCESS IN EXPORTING TO THE SOVIET UNION FROM THE 1970S ONWARDS WAS LARGELY THANKS TO LAURI KÄRÄVÄ.

Attorney Teemu Kärävä had acted as a trusted adviser to Martti Kemppi from the outset, and he joined the Board of Kemppi Oy in 1950. His son Lauri "Lasse" Kärävä (1948–2007) followed in his father's footsteps, providing the Kemppi family with reliable background support.

Lauri Kärävä and the Kemppis share a long history. Kärävä visited the Kemppi family during his holidays, and Hannu and Lasse, who were almost the same age, became friends.

Hannu Kemppi recalls how he and Lauri did all kinds of work at Kemppi from the age of 12 until they completed upper secondary school. The jobs varied from berry-picking to assembling the cores (transductors) of welding machines and everything in between.

Kärävä graduated from the Helsinki University of Technology with a master's degree in engineering. He wrote his master's thesis on the subject of welding for Kemppi, and he intended to come and work for Kemppi when he graduated, but things turned out differently. Kärävä went to work for VTT. It was his job to ensure that the weld seams at the Loviisa nuclear power plant would hold tight. This is how he cultivated good Russian contacts and forged relations with the country.

In 1977, Kemppi was going through difficulties. Hannu Kemppi called his friend and asked him to join the company as export manager. *"I called Lasse and asked him to come and help me. Jokke was working as CEO in Stockholm, and Kemppi was in a tight spot. Finland was going through a recession nearly as bad as the one in the 1990s, but we survived both of them."*

Lauri Kärävä made his first exports to Russia in 1978. Hannu Kemppi recalls how the older directors laughed at Kärävä's intentions to sell machines in Russia.

"We held a strategy day in Kalkkinen, and Lasse arrived one day late. Everyone else thought he had failed. Lasse was quiet for a moment before revealing that the trip had gone very well indeed. He had only gone and sealed a deal worth over 30 million Finnish marks."

Kemppi's success in the Soviet Union was largely thanks to Kärävä. Exports to Russia were a significant factor in the company's overall growth, as the construction of the subsidiary network was funded with money earned exporting to the east.

In addition to exports to the east, Kärävä was responsible for successfully developing technology and product development at Kemppi. He also took part in marketing along with Jouko Kemppi.

"Lasse, Jokke, and I had a good symbiosis. Jokke was good at managing relationships, Lasse was an intellectual, and I looked after the finances. We are the team that built Kemppi."

Lauri Kärävä, who served as Kemppi's deputy CEO in the 1980s and 1990s, was a well-liked person. He was an adept leader and good at socializing.

Kärävä acted as Kempower's CEO from 2000 to 2004, and he played a significant role in striking the Cern deal.

Lauri Kärävä was on Kemppi Oy's Board of Directors from 1995 to 2004.

Lauri Kärävä, who served as Kemppi's deputy CEO in the 1980s and 1990s, was a well-liked person.

FROM THE SOVIET UNION TO RUSSIA

Evgeniya Dmitrieva has managed Kemppi's Russian subsidiary since 2009. Under her leadership, Kemppi has continued to enjoy success in the market despite some challenges.

Kemppi has a strong foothold in Russia. It has dominated the market since Soviet times, and its welding devices have been highly regarded among welders ever since the first machines were delivered in 1979.

The service workshop set up in Vyborg in the mid-1980s took care of thousands of Kemppi devices in the Soviet Union and helped Kemppi to build itself a strong reputation in the country. As a result of the collapse of the Soviet Union and the recession, sales of the devices decreased substantially. Luckily, the reputation that Kemppi had built up during the good times kept it afloat until sales of welding devices picked up again in the 2000s. Customers wanted value for money, and they specifically wanted to buy high-quality Kemppi machines.

Kemppi established a subsidiary in Moscow in 2000. Russia is one of the world's most important growth markets, and the new company enables Kemppi to provide better service to existing dealers and acquire new customers.

The subsidiary works with partners who have represented Kemppi since the late 1980s. By working with these partners, who are based in various parts of Russia, Kamppi has succeeded in building a strong, professional network of dealers. The dealers offer customers good technical support and a very high standard of service.

"*We are a kind of strong Kemppi family in Russia,*" says Evgeniya Dmitrieva, the manager of Kemppi's subsidiary in Russia.

Russia is a country where family and good relations mean a lot. Dmitrieva has the skills to foster good relations with customers and distributors. She has spent a decade taking the Kemppi spirit all over Russia and worked with purpose and vigor to build an integrated network in the country, foster relations, and arrange regular meetings with partners and distributors.

Dmitrieva's hard work has raised awareness of Kemppi among educational institutions and built a business that covers colleges, schools, and universities.

"Kemppi holds a strong position in Russia, and its market share has increased despite some challenges."

YEARS OF LEARNING IN AMERICA

At the end of the 1980s, Kemppi had numerous subsidiaries and representatives around the world, and it also wanted to gain a foothold in the U.S. market. Following extensive market research and the completion of a new product range developed for North America, Kemppi decided to establish a subsidiary in the U.S.A. It was spring 1987, and the company chose to set up in California. It was the nation's most populous state and a high-tech hub. At that time, local competitors did not have inverter technology, and the markets were using older technology.

A year later, the subsidiary was moved to Ohio, closer to the welding industry, but this did not have a dramatic impact on sales.

The U.S. market was difficult and more complex than anywhere else, and it was a huge area to cover. One market consisted of 52 states. The country's electricity network was also completely different from Europe's network. Kemppi should have designed a device that worked directly on the U.S. electricity network without any auxiliary transformers. The way companies worked in the welding market was also different. Distributors played a major role in the U.S. market. At that time, the U.S. market was dominated by three competing device manufacturers.

The large competitors were able to offer a full assortment of filler materials for welding mechanization, an extensive network of distributors, and a strong reputation. It was difficult to find a way in. If a distributor included Kemppi's products in its selection, one of the big operators soon called them up and threatened to stop working with them unless they removed the orange products from their range.

After five years of trying to gain a place for itself in the market, Kemppi decided not to squander any more time or resources on the country.

Before finally pulling out of the U.S.A., Kemppi had one last attempt at gaining a foothold by working with an O.E.M. partner. The collaboration was going well until one of the competitors acquired the partner.

The U.S.A. remains an interesting market. Kemppi learned some hard lessons, and it now knows what to do differently.

Kemppi's Road Show truck caught the eye at welding industry events. It offered an ideal opportunity to present products and entertain customers. Over the years, Kemppi has used demonstration trucks in several countries.

1990s

Center: The SPECIAL KEMPOMAT 2000, a special model introduced to the Kempomat range in 1999. A total of 2,526 units were manufactured in 1999 and 2000.

A decade of changes

FOR KEMPPI, THE 1990S WERE A TIME OF DRAMATIC CHANGE. THE DECADE BEGAN POSITIVELY, AS DET NORSKE VERITAS GRANTED KEMPPI ISO 9001 QUALITY MANAGEMENT CERTIFICATION.

Kemppi's senior managers decided to initiate the ISO 9001 project in January 1989. They aimed to obtain certification in 1990. The determined work and thousands of hours of effort resulted in Kemppi becoming the first manufacturer of welding equipment to receive quality management certification.

Kemppi extended its quality requirements to cover subcontractors. The company worked closely with its main subcontractors on quality management systems. Among other measures, Kemppi awarded a seal of approval to partners able to attain good quality targets every year.

Customer satisfaction was measured at regular intervals, and the company released regular quality reports covering in-house production.

Kemppi also began emphasizing its environmental values. To this day, the factories do not use any substances that are hazardous to the soil or the climate. The company endeavors to systematically reduce the amounts of waste and emissions it produces, reduce its energy and water consumption, and use more and more recyclable materials and components. For example, 99 percent of the plastic used in production is recyclable. The environmental policy also involves ensuring the commitment of stakeholders to environmental matters.

Kemppi was granted the ISO 14001 environment certificate in 2001.

The collapse of the Soviet Union at the beginning of the 1990s was a setback for Kemppi. It coincided with the onset of a recession in Europe and reduced sales in Finland, making for the worst crisis that Kemppi Oy has faced. The demand for welding machines fell everywhere, and trade with the Soviet Union came to a complete stop.

The worst year of the recession was 1991. Finland's gross domestic product contracted by 4–5 percent, and there were almost 300,000 unemployed people in a population of around 5,000,000. The downturn was reflected in the global economy: Finland's traditional export markets – the Soviet Union, Sweden, the U.K., and the former C.M.E.A. countries – faced difficulties, and the Finnish mark was struggling to find its place on the foreign exchange markets.

Sales of welding machines dropped throughout Europe, and the Scandinavian market contracted by more than 30 percent. The recession impacted Kemppi in the form of furloughs and terminations. It was a difficult time for a company that prided itself on taking care of its personnel.

The company needed to make it through the recession and come out stronger than ever. Kemppi focused on developing working methods, and the company introduced new management, IT, working time, and remuneration models in the 1990s. People learned to work in teams, and the organization transitioned toward process management.

The steering group for the development process was led by Production Director Kari Kemppi, and HR Director Eija Vartiainen (née Kemppi) consulted on the process. She received background support from the University of Helsinki's developing work research unit and the Tavistock Institute in London – a trailblazer in the application of industrial group work methods.

"*The work that Kemppi set in train in the 1990s has given rise to the company's success over the last 20 years. The outcome of the development work was a change in Kemppi's management systems and approach. Work was viewed horizontally rather than from a top-down perspective. It was a really big change,*" Eija Vartiainen recalls.

What changed? The production employees switched to flexible working hours. Production was reorganized into a product factory, which was divided into workshops. Every workshop was run by a separate team overseen by a Production Supervisor. During the process, the title of Foreman was superseded by Production Supervisor.

The remuneration systems were also revamped. The new remuneration system empowered employees to affect their income through their own work input. In production, bonuses for work productivity, quality, and delivery reliability supplemented each employee's fixed hourly wage. The remuneration system for office employees and technical officers consisted of amounts determined according to the demands of the job and personal targets. Office employees also transitioned to the new working culture in 1996.

It was not easy to create something new – while the company's operating methods were being transformed, furloughs and terminations were occurring in production. However, the steering group, chief shop steward, and personnel worked seamlessly and collaboratively.

"Kemppi's Production Planning Manager Seppo Jääskeläinen wrote a theater play during the recession of the 1990s, and the leading role was played by Kalervo

KEMPPI'S FUNCTIONS WERE RATIONALIZED. THE METAL, MAINTENANCE, AND MECHANIZATION DEPARTMENTS AND THE PEKANMÄKI BUILDINGS WERE SINGLED OUT AND SOLD OFF. KEMPPI HAD ALSO MADE A STRATEGIC CHOICE TO STOP MANUFACTURING COMPONENTS ENTIRELY. THE HERRALA METALWORKING FACTORY WAS SOLD TO SCANFIL OY, WHICH SUPPLIED KEMPPI WITH THE CASING COMPONENTS NEEDED TO MANUFACTURE WELDING EQUIPMENT.

Kemppi Oy's management team in the 1990s. Background, from left: Lauri Kärävä, Kari Kemppi, Jari Kemppi, and Paul Gustafsson. Foreground, from left: Anne Sointu, Jouko Kemppi, Hannu Jokela, and Anssi Rantasalo.

Piiponniemi, the chief shop steward in our company. The Lahti City Theater offered up a director for the play, and it was performed on the theater's small stage," Vartiainen says.

Anne Sointu, who joined Kemppi as CFO in 1993, brought a breath of fresh air to the company. Under her leadership, the company's information systems were consolidated, and, in 1997, all Kemppi employees around the world were on the same network, so they could get in touch with each other using a new technology called 'email.'

The product development team, led by engineer Hannu Toivonen, was responsible for the new products that were launched into an increasingly competitive market. In 1993, while the worst phase of the recession was underway, the legendary KEMPPI PRO and MASTER welding equipment ranges were unveiled in Essen. They captivated the imagination with their user-friendly approach and improved efficiency and reliability. The Pro was also the world's first digital power source.

At the Essen trade fair four years later, Kemppi introduced the MasterTig AC/DC welding equipment, which contained the latest digital control technology. The MasterTig was a commercial success.

Until 1995, Kemppi's machines were made mostly of metal. This changed when Kemppi stopped manufacturing components in-house. The designers were given the freedom to choose the materials to use for the equipment.

Kemppi Pro was the first machine to have its entire metal end replaced by a plastic end, but the Minarcs were the runaway success story. Making a welding machine entirely out of plastic was unprecedented. People thought that plastic was a less durable material than metal. In fact, plastic can keep its shape in situations where metal would end up dented.

Manufacturing complex injection-molded components from plastic was substantially more challenging than using sheet metal, and the Minarc hit a few bumps along the path from the drawing board to production. Tuomo Mattila, who was responsible for the product development of the Minarc at the time, recalls seeing smoke occasionally emanating from the laboratory as it raced to complete the model on time for the 2001 Essen fair. The electronics were ready, but the plastic molds still needed some fine-tuning.

The problems were overcome, the molds were completed in time, and the machine made it to the fair.

Nowadays, nearly 50 different types of plastic are used in production, and the company can handle even the most challenging components. Plastic is used to make frames, as well as wire feeders, wire spool frames inside the machines, very small, heat-resistant fuses, and everything in between.

There are two reasons why plastic displaced metal as the material of choice: Costs and better industrial design, and thereby also usability. The simple fact is that plastic is easier to form than sheet metal.

Environmental values also played a part in the switch. Nowadays, 99 percent of the plastic components that Kemppi uses are recyclable.

Anssi Rantasalo became CEO of Kemppi France S.A. at the end of 1994.

"*I'd been working for Kemppi for less than a year when Jouko Kemppi called me for the first time since I joined the company and asked me to come to his office. As I walked down the corridor, I was wondering what I'd done wrong*." But the meeting was not at all what Rantasalo had feared. Jouko and Hannu Kemppi had decided to send Rantasalo to France to run the subsidiary there. He was allowed to sleep on it before deciding.

After three years in France, Rantasalo's journey continued to Germany. He ran the German subsidiary and worked as European Director, before returning to Finland to take up the position of CEO at Kemppi Oy in 2002.

Although the company's operations were cut back as it tried to survive the recession, it had not forgotten about internationalizing. Kemppi had already conquered Europe – now its sights were set beyond the horizon. Kemppi established a sales network in South-East Asia in 1993. Sales Manager Sam Lim was responsible for representative sales in Singapore, Malaysia, Thailand, Indonesia, the Philippines, and Vietnam. Thanks to the strong network, it did not take long for Kemppi to boost its sales in South-East Asia several times over.

Sales representation was established in India two years later, in 1995. In the spring of 1998, the Kemppi Oy South America Limitada sales office was set up in Chile to take responsibility for retaining the company's positions, promoting sales, and establishing new customer relationships in Latin America.

Subsidiaries were opened in Poland, China, and Australia in the late 1990s.

After the collapse of the Soviet Union, the giant individual deals coordinated by the state procurement committee were consigned to history, and Russia and the Eastern European markets were integrated into European trade. New growth was sought in Russia in several ways, including developing the MIGOMAT, MARK, and PPS welding machines, which were suitable for welding aluminum.

The economy began to recover from the recession, and there was substantial growth from 1994 to 1998. The products were good, and "*sold like hotcakes,*" Jouko Kemppi recalls. By 1996, the company was back where it had been before the recession hit.

Systematic investments in export marketing bore fruit in every market except the U.S.A. The company backtracked from the market there and dissolved its sales company in 1994.

The company strengthened its position in Europe by setting up a central warehouse in Butzbach, Germany. This brought the products within reach of European customers more quickly.

Changes also took place in Finland. The Finnish marketing department was spun off as a separate company in 1992 under the name Kemppikoneet Oy. The new company was run by Marketing Director Paul Gustafsson. Kemppikoneet Oy was responsible for wholesale sales of machines, equipment, and supplies in Finland. The company rapidly boosted sales back to the level seen before the recession and succeeded in increasing the market share of Kemppi's products in Finland.

Seppo Mäki-Rahko, who began working for Kemppikoneet Oy as Regional Sales Manager in 1992, recalls how sales rocketed in 1995.

"*Back then, we were selling a lot of Kempomig 5200 SWs. The equivalent machine sold by our competitor had run into problems, and Kemppi was able to grab its share of the market. We were shipping equipment to every corner of the country.*"

Mäki-Rahko, who now works as Sales Manager, still comes across Kemppi equipment made in the 1980s and 1970s.

"*Many small-scale metalworking shops still weld with old Kemppi equipment. They are reliable and durable machines, even several decades down the line.*"

Kemppikoneet Oy was merged back into Kemppi Oy in 2011.

Kemppi's electrical equipment group was spun off as a separate company in 1997. Lauri Kärävä worked as Kempower Oy's CEO from January 1, 2000. In the time after that, Kempower developed a power source for CERN, the European particle physics center. The power source had such small fluctuations in output current that they could not even be properly measured.

When the decade came to an end, Kemppi was the global market leader in welding equipment with inverter power sources. The company worked all over the world with more than 40 representatives and regularly exported products to about 50 countries. Eighty percent of the company's production was exported. The company was dominant in its domestic market, holding a market share of 50 percent.

The Minarc was the first Kemppi machine to have its metal end replaced by plastic.

FACTS:

1990 Martti Kemppi was awarded the Federation of Finnish Enterprises' highest badge of honor. It was the first time the badge was awarded.

1990 Kemppi became the first welding industry company in the world to receive an ISO 9001 quality certificate.

1990 The central warehouse was established in Germany.

1990 The sales network expanded to Asia and Eastern Europe.

1997 Kempower Oy was established.

1993 A sales representation network was established in South-East Asia.

1993 Kemppi became the first manufacturer in the world to make the leap from analog to digital welding technology.

1994 The company stopped importing filler materials.

1995 The metal production department in Herrala was sold to Scanfil Oy.

1996 Sales representation offices were set up in Poland, India, China, Chile, and Australia.

1997 The MasterTig was launched.

1999 A subsidiary was established in Australia.

AN OPEN-MINDED MARKETEER

Kemppi is famous for its bold advertising and marketing campaigns. It all began in Sweden in the 1970s when the marketing material for a machine sales campaign mistakenly stated a price excluding tax. It caused quite a stir, but it also raised awareness of Kemppi among welders. Since then, the company has conducted eye-catching campaigns of the type that had not been done before in the welding sector.

Kemppi's advertizing underwent a major change in the 1990s when the company switched from advertizing management to brand management. The world was changing, and it was becoming increasingly important to conduct the right kind of marketing, particularly on the international welding equipment market. Good products could no longer be relied upon to sell themselves – companies needed to invest in brand maintenance in an entirely new way. The company began developing its marketing activities with an international approach. At the same time, Kemppi paid special attention to its brand image.

The company wanted to fuse Finnish values, such as honesty, reliability, and quality, with its brand. And because this was Kemppi – the forward-looking pioneer of its industry – things were often done slightly differently.

In 1994, Kemppi set out to reinforce the image of Finnish quality by signing an agreement with Ari Vatanen, a world-famous rally driver from Finland. He was the face of the Kemppi company with the theme "*La compétence finlandaise*," which translates as "*Finnish expertise*." The campaign succeeded on many fronts, including in dispelling the prevailing notion in France that Kemppi was an Italian company.

Over the years, the Kemppi brand has been underpinned by various slogans, including *Magical welding with Kemppi* and *Future welding technology*. Among these slogans was *The Joy of Welding,* a customer pledge that Kemppi used for many years. The slogan inspired a joyful feeling and customer satisfaction. The overarching idea was that Kemppi's reliable, user-friendly machines make welding work enjoyable. One advert featured a triple-decker bus instead of the more familiar double-decker one. Another advert depicted two Volkswagen Beetles welded together. The idea behind the image campaign for Kemppi, as a manufacturer of welding equipment, was to contribute to elevating the status of welding work. Kemppi's new marketing communications also sought interactions with consumers.

"*The slogan and the adverts were intended to communicate the idea that welding could also be fun and that high-quality Kemppi machines make it especially enjoyable,*" recalls Sales Director Hannu Jokela.

When a new visual appearance, slogan, and posters were unveiled at the Essen fair in 2001, the brand overhaul received extensive coverage in trade journals. This was unprecedented.

"*We have always approached customers differently from the other players in the industry. Every time we attend the Essen fair, we are expected to do something that puts a smile on people's faces or creates a wow effect – both in products and marketing.*"

The current slogan *And you know.* has taken the message from a humorous place into a more serious direction. *And you know.* refers to an increase in data and information. When you weld with Kemppi's equipment, you know what is happening in the welding process. You also know what quality feels like and that Kemppi always has a solution for your needs.

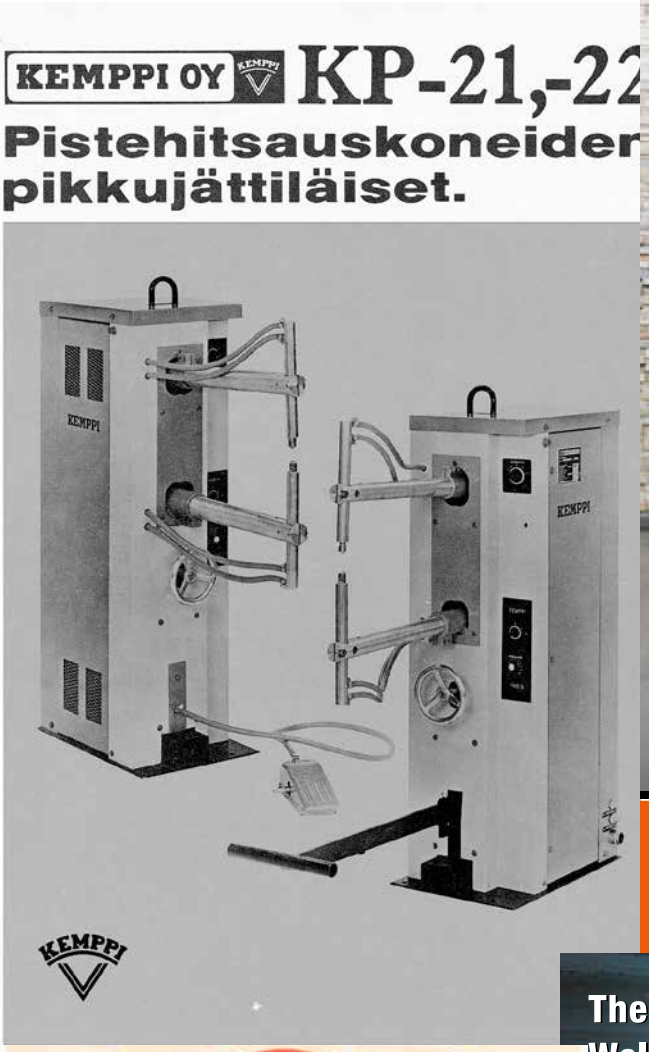
The next big step in marketing occurred when social media channels were taken into use alongside conventional communications channels and websites. The company's digital presence took on greater importance, and the creation of original content, such as videos, references, and blog posts, has expanded throughout the 2000s.

Interaction has become an important part of Kemppi's

IN 1994, KEMPPI SET OUT TO REINFORCE THE IMAGE OF FINNISH QUALITY BY SIGNING AN AGREEMENT WITH ARI VATANEN, A WORLD-FAMOUS RALLY DRIVER FROM FINLAND.

marketing, and a direct connection has been established with end-users via these new channels. Active discussions are held with the international Kemppi community on social media. Kemppi fans follow the company's latest posts and engage in discussions by commenting, asking questions, and sharing their own experiences and welding pictures. A social selling training course has also been held for salespeople.

MARKETING THROUGH THE AGES



READY BY MORNING

Kemppi Pro MIG revolutionized welding. When the welding machine was perfected and introduced at Essen Trade Fair in 1993, Kemppi was the first company in the world to move from analog welding technology to digital. The entire product development department was put to work designing this new product. The working days often stretched into the evenings, but that was no problem. The team was working on something genuinely new and captivating.

The new technology was developed by *trial and testing*, as software work was still relatively small in scale and carried out alongside other work. Pauli Hämäläinen, who was responsible for designing the power source, did the programming work on his home computer in the evenings and tested the results in the welding laboratory during the day.

"*The buzzword back then was 'ready by morning.' In the evening, I sat down and resolved the problems that had arisen during the day and tested them the following morning. It was an exciting time for everyone involved in product development. We were doing something that had never been done before,*" Hämäläinen recalls.

Digital control of the welding process and the welding machine was only supposed to be a minor addition to the product – one extra thing to make the welder's job easier. At that stage, nobody could foresee it becoming as big as it did.

The finished Kemppi Pro contained two major technical additions: processors and transistor technology. It was also the world's first system welding machine with digital control. Displays had been digitally-controlled in the past, but nobody had succeeded in controlling the welding process digitally.

Why was a digital process so important?

Auxiliary devices had been separate units since the time of the Multisystem, but the communication between them was limited or non-existent. Digital connections enabled significantly more versatile communication between auxiliary devices, and this opened new doors. For example, it was possible to alter the welding characteristics and the way the equipment were controlled by downloading new programs onto them. If a customer was not satisfied with one of the thousands of different characteristics of an arc, it could be adjusted. This was revolutionary. Digital functionality made it possible to develop welding control systems to meet customers' needs in an unprecedented way.

The advent of the Kemppi Pro transformed the design of welding equipment, making it more than just a matter of electrical engineering. Software design now also plays a key role.

Pauli Hämäläinen was responsible for the design of the Kemppi Pro power source.

Kemppi Pro, the world's first digital welding machine,
was unveiled at the Essen trade fair in 1993.

KEMPPI HELPS US SUCCEED

Vahterus, a company based in Kalanti, Finland, manufactures heat exchangers. Welding plays a significant role in these products.

Mauri Kontu started the business from scratch when he lost his job at the shipyard in 1990. He had a good idea based on demanding welding work with thin sheet metal. Around the same time, Kemppi created a machine that enabled the development of automated welding for thin sheet metal. The two companies discovered each other and embarked on a productive period of collaboration.

The manufacturing process for Vahterus' heat exchangers is challenging because of the material they use. Special machines are required to weld thin sheet metal – machines that offer uniform quality and reliability. Heat exchangers are used in places such as oil rigs and oil refineries. The heat exchanger technology has to work at high pressure and must be able to withstand substantial heat fluctuations. The welds must not leak under any circumstances.

"*Kemppi has been a key enabler of growth for us since the very beginning because our products are only as good as the quality of the weld,*" Kontu says.

Nowadays, the majority of the welding that takes place at the factory in Kalanti is done by robotic welding. The company builds the robots itself, and Kemppi optimizes the welding equipment to suit them.

"*We have used Kemppi's machines for well over five million welding meters on thin sheet metal. This is definitely a record for Finland and the Nordic Countries – perhaps also a European record*."

The machines are kept up to date. This ensures high-quality products. The factories have about 350 Kemppi welding machines, ranging from MasterTigs to brand new X8 MIG Welders, which Vahterus helped to develop in collaboration with Kemppi's product development team.

Vahterus has been one of Kemppi's customer pilot companies for many years now. It is involved in developing new equipment and providing user feedback. When the collaboration began, a ten-person team from Kemppi's product development department visited Vahterus to observe a normal day's work. This enabled them to identify what the welding equipment needs to do in production, how procurement works, and how maintenance is handled.

When the X8 was developed, a team of welders from Vahterus was invited to visit Kemppi in Lahti for a day. Before the machines were completely finished, a few were sent to Vahterus for testing, and the welders gave feedback on their user experience.

This form of collaboration benefited both parties. Kemppi helps Vahterus succeed. Vahterus challenges Kemppi to develop solutions for demanding welding processes. It is also important that Vahterus can contact Kemppi's technical support team immediately in the event of a problem.

Vahterus has taken one man's innovation and expanded it into an export business that employs almost 300 people. It makes industrial products where energy savings and environmental friendliness are critical. Ninety-five percent of the company's production is exported.

"*Kemppi helps us succeed,*" summarizes CEO Mauri Kontu, describing the significance of years of collaboration.

Vahterus, the company established by Mauri Kontu in 1990, is the market-leading developer of welded heat exchanger technology.

"KEMPPI HAS BEEN A KEY ENABLER OF GROWTH FOR US SINCE THE VERY BEGINNING BECAUSE OUR PRODUCTS ARE ONLY AS GOOD AS THE QUALITY OF THE WELD."

Seppo Mäki-Rahko has worked as Sales Manager for the Finnish market since 1992, and he still sees people using Kemppi welding equipment manufactured in the 1970s.

Technology Development Director Tuomo Mattila has also worked at Kemppi since 1984. He was an integral part of the product development team that worked on the world's first digital welding machine, the Kemppi Pro.

Sergey Vasiliev from PKF OTS LLC and Aleksandr Ardashnikov from TSTS Vyborg LLC are Kemppi's most senior distributors in Russia. Both began working as Kemppi distributors in 1991 following the collapse of the Soviet Union.

The men remember when Kemppi opened its own service center in Vyborg in the 1980s. At that time, the largest customers were shipyards, and one of Kemppi's largest customers was operating in Vyborg.

2000s

KempactMan entertained delegates at the Essen trade fair in 2005.

A period of strong growth and expansion

IN THE 2000S, KEMPPI EXPANDED TO BECOME A GLOBAL COMPANY. THE GROUP BROADENED ITS HORIZONS OVER THE COURSE OF A FEW YEARS INTO PLACES SUCH AS SWITZERLAND, CHINA, INDIA, AND RUSSIA. "INTERNATIONALIZATION HAS BEEN VERY IMPORTANT. OPERATING IN SEVERAL DIFFERENT COUNTRIES AND CONTINENTS BALANCES OUT THE RISKS. WHEN THINGS ARE GOING BADLY IN ONE PLACE, THEY ARE GOING BETTER SOMEWHERE ELSE," ANSSI RANTASALO SAYS.

KEMPPI
The Joy of Welding

KEMPPI
The Joy of Welding

Anssi Rantasalo became Kemppi's CEO in 2002 when Jouko Kemppi took over the chairmanship of the Board of Kemppi Oy.

"When we started thinking about my successor, dad advised me to look in-house. Anssi had been working for Kemppi for more than a decade, and he knew the company. He was a natural choice," Jouko Kemppi says.

When Rantasalo became CEO, Jouko Kemppi took a long vacation so that the new CEO could settle in and get to work in peace. This was Kemppi's way of demonstrating to the rest of the organization that hiring a CEO from outside the family was a genuine decision and that responsibility for leading the company had really been passed on.

"It was a great gesture from Jouko," Rantasalo recalls.

In Rantasalo's time at the helm, Kemppi shifted its focus from manufacturing machines to offering comprehensive solutions.

Finland was digitalizing at pace in the 2000s. The internet, cellphones, and various electronic services and programs rapidly spread far and wide, creating a brand new landscape.

Digital technology and the industrial Internet of Things also presented new opportunities for welding. Whereas customers were once sold a machine that would last generations, now they were also sold the software that enabled improvements to the way the machine operated. The same machine could be used to weld different materials by changing the software.

Kemppi also offered various expert services and welding processes to improve customers' productivity.

"Products are converging at pace, and the well-worn term 'comprehensive expertise' is becoming increasingly important. Many customers expect hardware suppliers to provide more comprehensive consulting on welding technology," Rantasalo said of Kemppi's plans for the future in an interview in 2001.

The new millennium began with the establishment of a subsidiary in Moscow. Russia was – and remains – one of the world's most important growth markets. The subsidiary enabled Kemppi to provide better service to the distributors who had long been operating in the country and to acquire new customers.

"Customers appreciate fast deliveries from Finland. If the need arises, the equipment can be exported to Russia very quickly," says Evgeniya Dmitrieva, who was hired to run Kemppi Russia in 2009. In her ten years as Subsidiary Manager, she has worked hard to build a coherent network in the country, foster relations, and conquer new markets for Kemppi.

A subsidiary was set up in Poland in 2001 when Kemppi Spolka opened its doors in Warsaw. Poland was an important sales region for Kemppi even before the subsidiary was set up, but the time was considered right for the company to establish its own presence in the country. Following the collapse of socialism, an era of economic freedom took hold in Poland, and a large number of state-owned companies were privatized. In addition to Kemppi, many other foreign companies began transferring their welding production to Poland.

Jacek Rutkowski was hired as Kemppi Spolka's Subsidiary Manager. The subsidiary sought growth in the shipyard, transportation, and metal structures industries.

Kemppi France S.A. won the Sisu award in 2002 for its operations on the French market. The criteria for the award, which is given by the French-Finnish Chamber of Commerce, included matters related to finance, innovation, society, and management. The panel of judges was particularly impressed by the determination and perseverance – characteristics that have always been deeply ingrained in Kemppi's corporate culture – that Kemppi France had demonstrated over the years.

One of the major milestones of the 2000s was the change in the corporate working language from Finnish to English. This occurred in 2003 when Kent Eimbrodt, who had led the sales company in Australia, began working as Kemppi's Sales Director and joined the management team. All of the meetings needed to be held in English, so it seemed like a natural time to switch the working language throughout the corporation and not just in the management team.

In addition to the working language, the company's reporting also switched to English. This made many things easier. The number of misunderstandings decreased in contexts such as product development projects when the personnel used a single language for their documents and meetings. It also facilitated communication with the network of subsidiaries. Having a common language also boosted the Kemppi team spirit.

"2004 will go down in history as a successful year for Kemppi. Our net sales will be substantially higher than in the previous year, and our profitability will improve. We have succeeded in achieving what we set out to do one year ago. We will reach and even exceed the sales targets. The increase in the company's net sales and profit margin were substantially influenced by an uptick in sales of industrial machines – particularly among high-technology products. New ideas about our sales focus and active management are also gradually bearing fruit – sales have increased, especially among key customers." This Christmas address, written by CEO Anssi Rantasalo for the last issue of the staff newsletter, set the scene for the successes of subsequent years.

Global economic growth also found its way to Lahti, and Kemppi enjoyed a boom period from 2005 to 2008. In these years, the factory operated in two shifts – and occasionally also three shifts – sales went well, and the company made a greater operating profit than in all of the preceding years combined.

"Kemppi's net sales doubled in less than four years," Anssi Rantasalo recalls.

The strength of the world economy was not the sole explanation for these boom years. Something else was at play. Companies had had years of pent-up investment requirements since the recession in the 1990s, and Kemppi had made good product development decisions. At the Essen fair in 2005, customers were shown six new machines and the WiseRoot welding process for root pass welding, and these products addressed the precise need and circumstances which the markets found themselves in.

The company's net sales surpassed EUR 100 million for the first time in 2006. This was cause for a celebration, and Kemppi held a '100 million party' for its personnel at the Lahti Fair Center. In the same year, the product development team received recognition for years of hard work when the MinarcMig Adaptive 180 was awarded the prestigious Red Dot design prize. Designers Jonne Valola and Jarkko Havia collected the prize, accompanied by Sales Director Hannu Jokela.

LONG-TERM **LEADER**

Anssi Rantasalo came to Kemppi for a summer job in 1989, precisely as the company was celebrating 40 years in business. A couple of years later, he began working as Regional Export Manager and took charge of the French subsidiary and, after that, the German subsidiary. He was also responsible for sales all over Europe until he returned to Finland to take up the position of CEO at Kemppi Oy in 2002. Rantasalo served as Kemppi's CEO until 2017.

Rantasalo was a visionary leader who led Kemppi down the path to digitalization.

"Kemppi has always been a leader and trendsetter in its field. It introduced the first inverter power source, the first digital welding equipment, and it is spearheading the application software mindset. This pioneering spirit is an essential ingredient of the company's brand and image. "

In the 2000s, the welding business largely moved to Asia. In Rantasalo's time at Kemppi, an organization and business hub for the Asia-Pacific region were set up in Kuala Lumpur, Malaysia, and a production plant was established in India.

"Asia is home to half the world's population, and it will also have the toughest competitors in the future. That's why we need to keep our eyes on what they are doing."

Kemppi has positioned itself around the world – including in Asia – as a premium brand, a technology leader, and a quality manufacturer. According to Rantasalo, technology expertise is in Kemppi's DNA.

"Technology leaders cannot and should not compete on price. The products need to contain something extra that is useful to customers. For Kemppi, this is technology."

According to Rantasalo, Kemppi's success is based on courage, risk-taking, and a desire to be the best.

"In a family company, a quarter could last two-and-a-half years. This has enabled Kemppi to take risks and develop new technologies and services that do not necessarily result in immediate cash flow but that transform the sector and industrial structures, thereby creating new business."

The famous Kemppi spirit and can-do culture have carried the company through good times and bad. Rantasalo has christened it *"Skemppi"* – the spirit of Kemppi.

"Many people go to work to put food on the table and get home by the evening, but not at Kemppi. The company has a strange feeling of togetherness. Despite going through hard times, Kemppi has always done well and been among the top technology companies. Kemppi has proven to be a trustworthy and secure place to work."

Anssi Rantasalo worked for Kemppi for 23 years, and he was CEO for the last 15 of these. Over these years, technologies changed and software became an integral part of welding equipment and product development. Technology has turned dirty welding work into modern-day mechanical work characterized by quality control.

"*The only permanent thing is constant change.*"

ESSEN 2005

The 2005 Essen trade fair saw the introduction of a group of hit products. They included FastMig Synergic and MinarcMig Adaptive. The products were depicted by an animated film competing in various sports, including soccer, Formula One, and snowboarding. KempactMan, a character advertising the key theme of the fair, wandered the floor inviting people to visit Kemppi's booth.


KOBELCO
KEMPACT

One of the products launched at the Essen fair in 2005 was the FastMig. Customers immediately took to the system-class machine, and it has been the flagship of industrial MIG/MAG welding ever since.

Kemppi had offered synergic welding before, but the FastMig product range took it to the next level. The unique feature of the FastMig was that the welding programs were ready-made on the Synergic single-knob model designed for professional use. This made the welder's work much easier. Thanks to the program in the machine, Kemppi was able to offer customers features that had never been seen in products before. The welder selected which material was being welded with which filler wire and which mixed gas, and the equipment set the correct parameters. Even the name of the machine – FastMig – expressed the idea that the customer could weld more quickly and productively. There was also less post-welding finishing work thanks to the equipment's good welding characteristics.

The MinarcMig Adaptive, which was launched at the same trade fair and was substantially smaller than the FastMig, astounded customers with its compact size. The compact welding machine was ideally suited to installation work, as it was light and easy to move from one place to another. Despite its small size, the machine had power to spare. The welder was also able to adjust the welding parameters quickly and easily using the adaptive functionality. The machine also displayed the voltage and current to ensure a high-quality weld.

The third successful product launched at the fair was the MasterTig MLS AC/DC. The control panels included all of the functions required for TIG welding, and the automatic AC balance improved the quality of the weld. The machine was ideally suited to installation and call-out work. Its advantages over competing products were its light weight, small size, and portability.

In addition to the MinarcMig Adaptive, FastMig, and MasterTig MLS AC/DC, the trade fair also saw the launches of the MinarcTig, Kempact MIG, and Kempact Pulse machines.

Launching six new machines at the same time represented a major effort for the product development team and for production, but it was worth it. The products were uniquely built around customers' needs. Value for money was also on point, so all the pieces were in place for sales to rocket. Machines were sold in record numbers over the years that followed.

The incredible growth in sales also meant dealing with material volumes several times larger than before. Toivo Juntunen, who joined Kemppi as a Product Buyer in November 1973, recalls the company first pitching a small tent in the factory yard to store the extra materials. The small tent was soon replaced by a slightly larger tent. And when there was simply no space left for any more material, the company had to look for solutions. One such solution was to outsource logistics, a decision taken in 2007.

"At that time, we had a logistics center in Germany to serve Central European customers, and a warehouse in Finland. We closed both of them and transferred the functions to DHL," says Mika Kuusela, who is in charge of supply chain management.

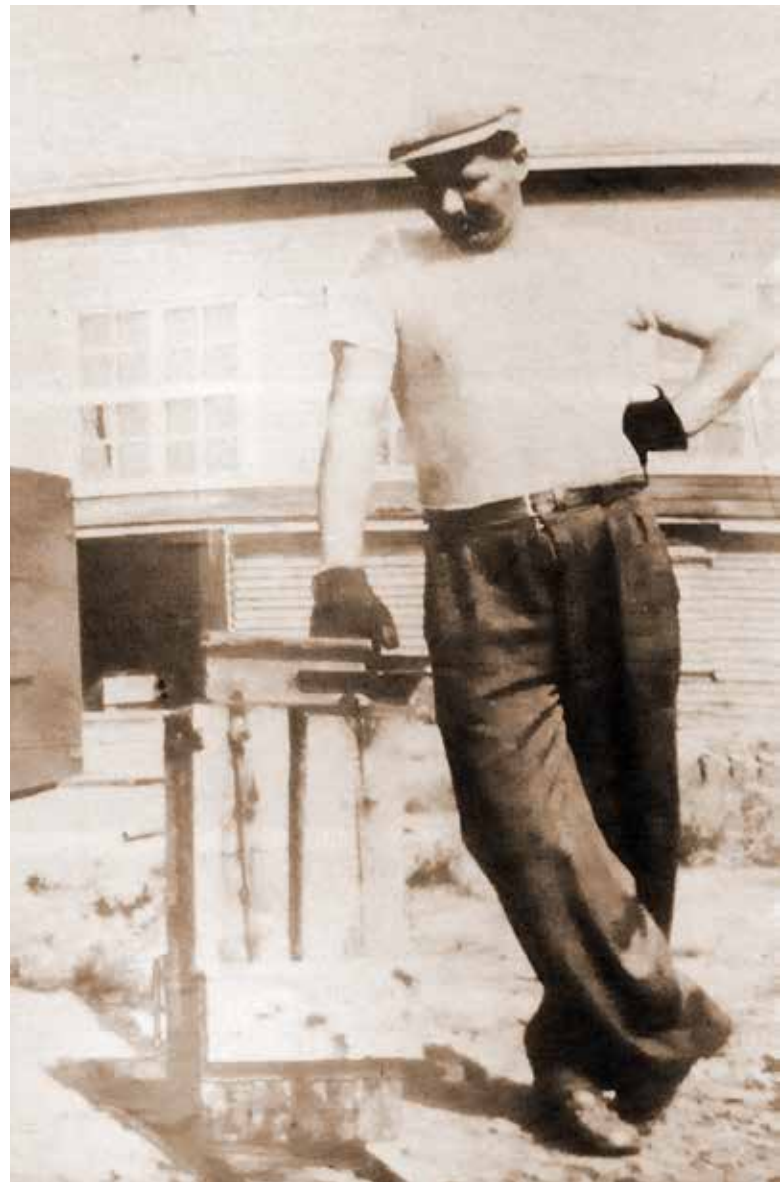
Things were also happening on the software side. The Wise application launched in the 2000s made welding equipment function optimally for all tasks. The product range can trace its beginnings back to a high-speed camera that Kemppi bought at the beginning of the 2000s. The camera shot 250,000 frames per second, making it possible to get inside the arc for the first time and see what really happens during welding. The camera provided precise samples of the behavior of the welding arc and filler material during welding. It showed that the transfer of substances could occur with large droplets, pushback, direction, flow, rotation, explosion, or short circuits. In addition to the way substances were transferred, it was possible to observe various phenomena that were not even known about before.

With a better understanding of the behavior of the filler material, it was possible to develop something entirely new.

"Thanks to the high-speed camera, we gained an understanding of the arc's electrical and mechanical parameters and their interactive effects. It opened the door to entirely new possibilities," recalls Mikko Väisänen, who is in charge of global sales.

The Wise software solutions for MIG/MAG welding enabled welding productivity to be taken to the next level. It was not possible to achieve the same quality and productivity with conventional MIG/MAG welding processes. With short arc MIG/MAG welding, events such as short circuit releases happened so quickly that the Wise process needed to use predictions of electrical variables at the time of release in order to transfer the substance

ON NOVEMBER 3, 2002, KEMPPI'S EMPLOYEES RECEIVED THE SAD NEWS THAT MARTTI KEMPPI HAD PASSED AWAY. MARTTI KEMPPI'S MEMORIAL BOOK WAS FILLED WITH THE MEMORIES OF KEMPPI EMPLOYEES AND FAREWELL MESSAGES FOR THE KEMPPI FAMILY.



without splashing. Thanks to the high-speed camera, the changes made on product development projects and the effects of changes on the arc were instantly visible, and it was possible to evaluate whether the change was desirable straight away.

The most revolutionary aspect of the Wise product range was that customers did not need to buy a new machine when they wanted improved power.

"We developed optimized special processes for demanding applications so we could resolve customers' problems or needs with software rather than new machines. This was unique," Väisänen says.

Depending on the application, the Wise products affected either the efficiency of welding or quality of the weld.

The 2000s were also a time of new business models. New growth was sought by expanding the business from equipment manufacturing to providing services and solutions. In addition to manufacturing welding equipment to address customers' requirements, Kemppi sold expertise, consulting, and processes. Tools that enabled customers to make the most of their equipment and boost the efficiency of production.

The spearhead was the Kemppi ARC System, which was launched in 2008. Now known as WeldEye, the welding management system enabled customers to monitor and improve the quality of their welding production and increase welding productivity. In addition to equipment, customers were sold software solutions that enabled data on the welding process to be collected. Kemppi also offered various expert services to improve process productivity.

What made the welding management system revolutionary was that it introduced entirely new tools for developing production. The crucial aspect was that it replaced hunches with real data. The Kemppi ARC System collected data from the welding equipment in use and sent it to a server to be analyzed. This enabled welders to be trained better and work more efficiently, which led to improved production efficiency.

"Earlier, you may have had a hunch about something like the wire consumption or the machine's duty cycle, but now you could know precisely. This significantly improved the quality of the production process," Kari Kemppi says.

The Kemppi ARC System also reduced the number of hidden welding defects, thereby substantially reducing the repair costs associated with welding defects.

Kemppi reinforced its digital expertise by acquiring JPP-Soft Oy, a Lahti-based software company, in 2009. JPP-Soft was engaged in software development, as well as other business activities, including website creation and maintenance. These activities were not directly related to Kemppi's core business, and when Kemppi reorganized its software development operations in 2015, it transferred the Kemppi ARC System software developers into the Kemppi organization and sold JPP-Soft to Cubescom Oy.

All good things come to an end, and the boom years were no exception. The global financial crisis also impacted the welding industry, and Kemppi's net sales fell by almost a half.

"Sales fell off a cliff in the fourth quarter of 2008, and the company just about broke even for the year. The year after that was fairly brutal. The company lost half of its net sales, but the Group as a whole turned a profit. It was an incredible achievement, which not many companies would have been capable of. All of the personnel pulled together and showed flexibility. It was the hardest year of my career," Rantasalo says.

Just while production was slowing, Kemppi opened the doors to its new electronics factory.

The factory had been eagerly anticipated, but when it was finally completed, the opening ceremony took place under dark clouds. Net sales had plummeted from EUR 140 million to EUR 70 million. *"Kemppi's factory in a gloomy economy,"* announced an article in the February 2009 edition of Tekniikka & Talous magazine.

The ribbon was cut by Jyrki Katainen, the Minister of Finance at the time, who noted in his opening speech that when the recovery begins, the companies in the strongest position will be the ones who have their production and competitiveness in order. *"People who roll up their sleeves when the going gets tough are the ones who have built this country's future and who carry the rest of us,"* the speech continued.

Before the electronics factory was completed, the electronics department was squeezed into the attic of the assembly plant. It had one SMD line and one wave soldering line, and when production was working around the clock in the good years, the employees and the machines were working hard. Something had to be done.

The ideal situation in terms of material flows would have been to build an electronics factory above the assembly plant, but this could not be done. The decision was taken to build an entirely new factory next to the assembly plant.

Thanks to the good years, it was possible to install two SMD lines and two wave soldering lines in the new factory. Now the factory would always have one functioning line if something unforeseen occurred. This was a major change in terms of risk management.

The design of the factory had also taken ergonomics into account. Many work phases became easier and production was more efficient thanks to the move from 900 square meters (9,700 square feet) of space to 5,500 square meters (60,000 square feet). Actions to adjust the workload also affected productivity. Whereas in the old factory, testers needed to carry equipment weighing more than 20 kilograms (45 pounds) to their workplaces, they were now able to move them around on carts all the way there.

Ergonomics were also improved by systematically monitoring working postures. Electric desks were standard features, and various chairs were offered so that everyone could choose the most suitable option.

Vilma Pirttikoski and the stacking of the circuit boards.

Kirsi Mamia tests circuit boards at the new electronics factory next to Jani Mäkäläinen.

Kirsi Mamia remembers what it was like to work in the old electronics department, particularly during the boom years. The small space was cramped and hot.

Mamia is an electronics tester. She checks that the circuit board's components are intact and arranged the right way round. If something is not right, she fixes it. In addition to testing, Mamia leads break-time exercise classes in the electronics factory most days. The exercise classes are one of Kemppi's many efforts in the interests of occupational well-being.

A physiotherapist provides Mamia and the other employees trained to lead break-time exercise classes with new tips a couple of times a year to ensure that the exercises are not always the same and that they remain enjoyable.

The exercise class breaks up the day appropriately. It gets the blood flowing and the chins wagging. Laughter can be heard here and there whenever someone is having difficulty contorting themselves into the right position. The difference in terms of alertness in the workplace is immediately apparent. If the exercise breaks cannot be held because there is too much work on, people ask after them a few days later. It is important to find time for exercise.

Mamia maintains her alertness by working in job rotation. Working at different stations makes the job more enjoyable and provides an opportunity to catch up with colleagues who are not near the ordinary workplace every day.

Building a dedicated electronics factory in Lahti was a bold move, but one that was typical of Kemppi. At a time when many other companies were shifting their production to other countries, Kemppi did just the opposite and carried on producing in Finland. The decision to build a dedicated electronics factory was the right one despite the tough times the business was going through because welding power sources are nowadays mostly about power electronics and other electronics. The machine's brain is the circuit board, and Kemppi did not want third parties making them. For example, the flagship product – the X8 MIG Welder – has a power source containing 20 circuit boards.

The welding equipment factory had previously been seen as a workshop, but it was transformed by investments into a modern electronics factory employing more electronics workers than engineers.

"A welding machine is just a machine. What makes it special are all the smarts and electronics that are in the machine. We wanted to keep this expertise in-house," Teresa Kemppi-Vasama says.

It was also a question of quality. When the electronics are connected to the circuit board at the company's own factory, it knows what is being provided to customers.

The electronics factory has been highly beneficial to employees and product development while reducing lead times and improving quality. The lines and various work phases have been gradually automated. At present, the SMD lines, wave soldering lines, and varnishing line are fully automated.

While the electronics factory was being built, the company expanded the assembly plant and enhanced the efficiency of its operations.

This meant moving the large varnisher acquired in the early 1990s and the electric transformer in the middle of the plant to a new location. The space was opened up, and assembly was transferred to three main lines going through the plant.

Modernizing the premises and operations required flexibility, as the plant remained in operation throughout the renovation. The factory was modernized one area at a time, and space needed to be made for the affected functions somewhere else.

"Now the premises are good and the material flows work well," says Mika Kuusela, who is in charge of supply chain management.

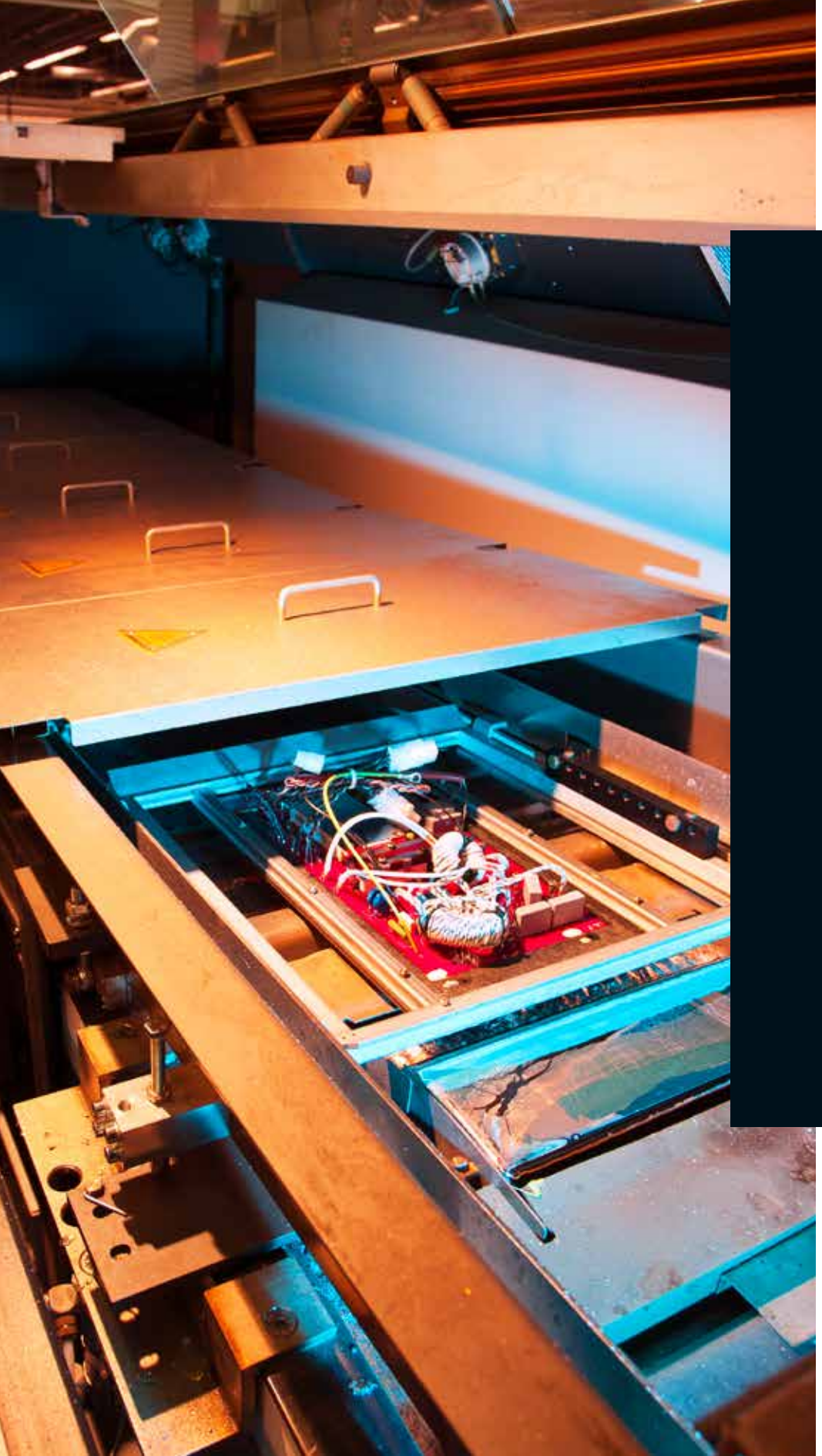
New technology was introduced to the plant, and materials were brought as close as possible to the assembly points with the help of tall automatic warehouses. The aim was to reduce lead times and minimize unnecessary material transfers from one place to another. Now, each product is assembled by one person from start to finish. In a sense, the company went back to where it began 70 years before when Martti Kemppi built each machine from start to finish.

Kemppi invested a total of EUR 25 million in the new electronics factory and the extension to the assembly plant.

Kemppi's 60th year in business – 2009 – was spent rationalizing operations, and around 100 people left the company. As the 2010s came around, Kemppi sought new revenue streams from solutions and services.

FACTS:

2001 The Hilarc 250 was presented at a historical exhibition of the Essen welding industry fair as one of the most important milestones in the history of welding technology.
2001 The millionth welding machine, a Master MLS 2500 was manufactured.
2001 Kemppi was granted the ISO 14001 environment certificate.
2004 The European particle physics research organization CERN ordered 200 special power sources from Kempower for its new Large Hadron Collider.
2005 Jouko Kemppi, chairman of Kemppi Oy's Board of Directors was named businessman of the year.
2006 Kemppi surpassed EUR 100 million in net sales and employed more than 500 people.
2006 The MinarcMig 180 Adaptive won the Red Dot prize.
2009 The FitWeld 300 welding machine and SuperSnake subfeeder received honorable mentions in the Red Dot competition.




KEMPPI
KEMPPI

Jyrki Katainen opened the new factory by starting up the component line, which produced an circuit board designed especially for the opening ceremony. In the background: Antti Kemppi and Anssi Rantasalo.

Hannu Jokela showing the audience the Kemppi circuit board bearing Jyrki Katainen's signature.

The new electronics factory under construction in 2008.

The new electronics factory was inaugurated on February 16, 2009, by Jyrki Katainen, who was then Minister of Finance. In the photo, he is shaking hands with Hannu Kemppi, while Sylvia and Jouko Kemppi are smiling in the background.

KEMPPI IN ASIA

Today, Asia is one of Kemppi's strategic focal areas. The company has sales in its subsidiary countries, as well as in Japan, Korea, New Zealand, and the South-East Asia region.

Kemppi has operated in China for over 30 years. During this time, it has achieved market leadership in the country in terms of demanding welding jobs, such as in the train carriage industry and aluminum platforms. For example, the new super-fast trains, many of which were welded using Kemppi machines, have exceptionally stringent equipment and quality requirements, but Kemppi's machines meet all the criteria. Frank Geng, who runs the subsidiary in China, believes the secret of success is in technology. The company stands out from its Chinese and American competitors by concentrating on developing technology.

"For example, Chinese manufacturers are engaged in tough price competition, but they have not yet reached the same standard of technology as Kemppi."

It all began in 1986 when Kemppi delivered its first welding machines to Shanghai Shipyards. Once the people at the shipyard realized that the Kemppi machines were capable of demanding aluminum welds, switch-controlled Kempomats and small inverters were sold by the container-load. Since then, China has played a significant role in Kemppi's business.

In 1991, Kemppi wanted to solidify its position in China. Instead of relying on individual transactions, the company began operating a regular business in the country with the help of a few large distributors. This worked for a while, but because the country was so large, the distances so great, and the markets relatively unknown, the decision was taken to concentrate investments, and Kenweld, a company based in Hong Kong, was granted exclusive rights to sell Kemppi's products.

Customers were introduced to Kemppi's products at various technology seminars around the country in collaboration with Kenweld. The collaboration bore fruit. Sales picked up, and the products were shifting at such a rate that Kemppi hired an external sales manager to work in Shanghai in 1998.

The investments in the Chinese market were fruitful and, when 2000 came around, it was time to take the next step: Kemppi opened a sales office in Beijing. Over the next four years, sales more than doubled, and this encouraged Kemppi to open its own subsidiary in the country. Kemppi Trading Beijing Company Ltd, now known as Kemppi Welding Technology, opened its doors in 2004. One of the new subsidiary's most important roles was to build a comprehensive network of dealers in the country – a task it completed successfully. In nine years, the number of dealers increased from 10 to 65. At the same time, interesting new products were launched, including the FastMig, KempArc, and ArcQ.

In the years that followed, Kemppi expanded rapidly in China. In 2005, a sales office was established in Shanghai, and, the following year, the Kemppi Suzhou Sourcing Office was set up in Suzhou.

In November 2018, Kemppi broadened its horizons further by opening a torch factory in Wuxi. It was possible to transfer the production of welding torches and pistols, which were mainly manufactured manually, from Finland to China because an efficient network of component suppliers had been built in China over the years. Locating the manufacturing operators closer to the network improved the competitiveness of the torches in a highly price-sensitive market and accelerated growth on secondary markets.

In addition to welding torches, the Wuxi factory produces fans for respirator helmets and other products.

Australia has been an important export market for Kemppi since the 1980s. Kari Kemppi served as director of the subsidiary in Australia from 2004 to 2005. Pictured: Kari with the Australian personnel shortly before he returned to Finland.

Ari Pirinen at the Indian Railways factory in Kapurthala in 1984 following a delivery of Kemppi equipment.

Kemppi's personnel at the Beijing Essen Welding & Cutting fair in 2006. Bottom row from left: Selina Shi, Jouni Karhu, Lynn Lin, and Aarno Laine. Back row from left: Bloose Liu, James Hu, Alex Lu, Lin Wei, and Roger Liu.

Hannu Jokela at a customer event in Beijing in the early 1990s.

Kemppi has also been operating in India for a long time. Cooperation between the countries began when Indian Railways ordered 64 welding machines from Finland in 1984. Kemppi won over the Indian engineers with the same arguments it would use to convince its Chinese customers a couple of years later: the high quality of the machines and technical expertise.

"Indian Railways was interested in inverter technology, which was new at the time. We have been working together ever since," Director Hannu Jokela recalls.

Like China, India is geographically large. For this reason, Kemppi has sales personnel in both Delhi and North-East India, as well as a subsidiary in Chennai which was established in 2011.

When the company set out to establish a subsidiary in India, the plan was to conquer the market with the XiM product range, which was designed specifically for the Asian market. The XiM machines were less expensive than Kemppi's other machines, and a Chinese contract manufacturer in Suzhou began making the machines in 2010. The company soon realized that India imposed huge import duties. It was significantly more cost-effective to establish a factory in India and begin manufacturing welding machines there than to import the machines from Finland or China. The production of XiM machines was transferred from China to India in 2011 when Kemppi opened its factory and subsidiary in Chennai. At the same time, the product range was renamed HiArc.

The Indian market presented unique risks, which were identified. For example, the subcontractor chain was not as well developed as in China, but Kemppi wanted to be a pioneer, and it believed that the subcontractor chain would develop. Despite these expectations, it never reached the desired level. In 2017, the HiArc machines went out of production and the Indian factory was closed. Kemppi decided to focus on developing its sales network in India and building application centers.

Today, Kemppi India employs more than 30 people under the management of Rashmiranjan Mohapatra.

Kemppi also expanded its business into South-East Asia in the 2010s. The company had a representative in Singapore for many years, and it wanted to reinforce its customer service network in the region. For this reason, it decided to establish a subsidiary in Kuala Lumpur, Malaysia. The aim was to turn Malaysia into an Asian hub, which would service Kemppi's broad customer base in South-East Asia.

The APAC HQ opened in 2014 and operated in Malaysia, Singapore, Thailand, Vietnam, the Philippines, and Indonesia. It was tasked with improving Kemppi's market position and supporting the subsidiaries in the region. The customer service network was enhanced with the addition of new distributors.

Following several discussions at the head office in Finland, the decision was taken to send Anssi Rantasalo, then the CEO, to Malaysia for two years. Asia is characterized by a culture based on interpersonal relations, and status plays a crucial role. Doors open more readily to a CEO than to a sales director. Rantasalo was also tasked with sounding out the Asian market, finding out about competitors, and helping the Asian sales team.

The oil price crash in 2014 affected the country's investments and economy. Projects were put on ice indefinitely, and the welding business hit a brick wall. The Kemppi Welding Solutions Sdn Bhd closed its doors in 2017, and sales in Malaysia moved forward with the help of distributors.

Kemppi has its own representatives in Kuala Lumpur under the direction of the Australian subsidiary. The team of 16 people, managed by David Green and based in Smithfield near Sydney, is responsible for sales to Malaysia, New Zealand, Singapore, Vietnam, Indonesia, Thailand, and the Philippines.

Kemppi has been operating actively in Australia since the 1980s. The country's mining industry has been an important source of sales since the beginning. Kemppi's machines, which are suitable for use in challenging environments, have established a strong position in the market. The company has a total of 82 distributors in Australia and New Zealand.

Kemppi is seeking new growth in China and India with robotic welding. The first robotic welding application center was opened in Beijing, China, in 2017. A second application center was established in Pune, India, in 2018. In the same year, Kemppi opened a factory in Wuxi, China. In 2019, demo centers were opened in Delhi and Kolkata in India.

ROBOTIC WELDING

Kemppi believes in the power of collaboration, and when the best operators in the industry put their heads together, it can lead to something unique, such as the robotic welding application centers in China and India.

The application centers display a wide range of Kemppi's robotic welding equipment and robots from well-known manufacturers of production robots. The collaboration makes it possible to offer customers better, faster, and higher-quality solutions.

At the application centers, Kemppi's welding specialists help customers to optimize their welding applications and offer them welding training if they need it. Customers and dealers can familiarize themselves with the top-grade A7 MIG Welder, KempArc Pulse 450, and KempArc SYN 500 welding solutions on-site. They gain a tangible understanding of the efficiency benefits available with Wise processes, and they see how easy it is to control a system such as the A7 MIG Welder using a browser-based user interface.

The robotic welding application centers were opened with the aim of providing better service in the growing Chinese and South-East Asian markets. Car factories in China are among the companies acquiring a large amount of robotics for their production lines, and Kemppi's welding technology is a part of this.

"The application centers are a natural step in markets where robotic welding is becoming more commonplace in tandem with increasing automation. Customers can enhance the efficiency of their operations and improve productivity by automating work phases. If there are no technical problems, a robot can produce exactly the same weld time after time, and it never gets tired of monotonous work," says CEO Ville Vuori.

2010s

CEO Ville Vuori opened the robotic welding application center in Pune, India, to great fanfare in 2018. Adjacent (left): Subsidiary Manager of Kemppi India, Rashmi Mohapatra.

Global growth

THE FINANCIAL CRISIS OF THE 2000S AND THE INCREASINGLY COMPETITIVE BUSINESS CLIMATE, PARTICULARLY IN ASIA, LED KEMPPI TO DECIDE ON A CHANGED STRATEGY – ALONGSIDE WELDING EQUIPMENT, IT NEEDED TO BUILD HIGH-VALUE-ADDED SERVICES. THIS HAPPENED BY AUTOMATING THE PROCESSES FOR PRODUCING WELDING EQUIPMENT AND DEVELOPING SMART WELDING EQUIPMENT AND WELDING MANAGEMENT SOFTWARE.

KEMPPI

Slowly but surely, the downturn gave way to green shoots, and 2010 was a successful year for Kemppi. The company returned to growth and made progress in many areas. The new subsidiary in India began operating, and Kemppi's new forays into areas such as customized welding processes, robotic tandem welding, and mechanized MagTrac carriages raised significant interest.

"It is clear that the focal point of economic activity has shifted toward Asia as a result of the recession. One of the ways this has reflected on Kemppi's business is in the availability of products tailored for the Asian markets. We have also established a new subsidiary in Chennai, India," wrote Anssi Rantasalo in an editorial for Kemppi's customer magazine ProNews in 2010.

The production plant opened alongside the Chennai subsidiary was Kemppi's first production plant outside Finland. The HiArc MIG welding machine designed for the Indian market was unveiled at the plant's opening ceremony.

Kemppi also established a subsidiary in Kuala Lumpur, Malaysia, in 2014. Kemppi Welding Solutions Sdn Bhd was intended to function as a business hub for the entire Asia-Pacific region. The unit served industrial companies in Malaysia, Singapore, Thailand, Vietnam, the Philippines, and Indonesia.

CEO Anssi Rantasalo would later move to Malaysia for a couple of years to sound out the market and get the operations off the ground. Day-to-day routines were handled in Finland by Mika Kuusela and Katri Sahlman during that period.

But before the Malaysian subsidiary was opened, some other significant events took place.

The millennium started in impressive fashion as the Kemppi DataStore concept grabbed the 2010 quality innovation award for its combination of technology and commercialization innovations. Kemppi DataStore

was an internet-based welding store, which enabled customers to buy and download items such as welding processes, welding programs, and firmware updates. The concept represented an entirely new mindset in terms of purchasing and customizing welding equipment for customers' needs. The value received by customers was no longer in the machines themselves but in the applications and services that they could access. Users accessed Kemppi DataStore to download the exact welding processes and features for operating and welding that they needed for their work. The machine was just an instrument.

A tool the size of a cellphone was connected to a computer with a USB cable, and it served as the link between the internet and the welding equipment.

"*The most important aspect of automation and digitalization is the added value that we can offer our customers in addition to conventional welding equipment. And in order to do this, we must understand our customers' business logic and know what is happening in the field. That is why we constantly remain close to our customers,*" Teresa Kemppi-Vasama says.

Digitalization and automation have been dramatically altering business models throughout the 2000s, but Kemppi has been at the crest of this wave.

Kemppi has been working on digital solutions since 1993 when it introduced the first digital welding machine, and the company is at the forefront of the development of welding management systems. For example, WeldEye is the world's most advanced web-browser-based system for global online welding management. It shows all of the factors influencing welding production via the internet, anywhere and at any time. The web-based ERP system also enables the company to offer a higher standard of online service to customers.

The amount of software on welding equipment has increased substantially. The number of coders employed by Kemppi has risen at the same rate.

"Fifteen years ago, we had two software specialists developing programs. Now we have dozens of experts," says COO Katri Sahlman.

The software business is rooted in a desire to gain a better understanding of customers' needs and create something new.

Kemppi established an entirely new business unit in 2010 for this purpose. The Welding Management Solutions (WMS) business unit was tasked with developing and commercializing various solutions to support welding. The unit's first job was to redesign the environment for the product then known as the Kemppi Arc System so that the incoming data on the welding process could be combined to ensure and document the quality of the weld.

The new solution was launched in the summer of 2012. The first pilot customer, Outotec's Turula workshop, took receipt of its first installation in the spring of the same year.

"The Kemppi Arc System 2.0 was the first clear IoT solution for welding. It could also be connected to welding equipment made by companies other than Kemppi, and this was a crucial feature," recalls Kari Kemppi, the manager of the business unit.

In 2013, Kemppi strengthened its position as a pioneer of industrial IoT by acquiring a Norwegian company called Weldindustry AS, the world-leading developer of software for the welding industry.

The transaction was an important milestone in Kemppi's strategy for the future. The company had previously acquired JPP-Soft, a software company based in Lahti, and now it was possible to develop a software and digital services for the welding industry at a new level.

"Weldindustry AS's WeldEye software for welding documentation and quality control added a new dimension to the Arc System concept," Kari Kemppi says.

The company immediately set to work on integrating the products. The Kemppi Arc System, known as KAS 3.0, was launched at the Williams Martini F1 team's headquarters in the U.K. on June 18, 2014. It heralded the beginning of a new chapter in the history of digital welding. KAS 3.0 was a cloud service intended for companies of all sizes and types working with welding production. The service enabled a boost in welding productivity and substantially more efficient quality control. All of the essential welding data could be accessed on any device with a web browser. The software was also compatible with all brands of welding equipment. Kemppi had created the opportunity for the entire welding industry to benefit from modern solutions.

The KAS 3.0 software underwent further modernization, and the entire solution was renamed WeldEye.

The Gamma respirator helmet on a mannequin at the EuroBLECH trade fair in 2016.

Following the recession, interest rates had hit record lows, which should have emboldened customers to consume and invest, but uncertainty about the future and the tightening of financial markets dampened the enthusiasm for consumption and investment. Even the Chinese economy began to slow, which was a cause for concern. One significant reason for this was the economic difficulty in Europe.

In an uncertain market environment, Kemppi leaned on quality.

"At Kemppi, we believe that quality will become increasingly important in the future. High-quality products and services are the foundation for business success, and high-quality production processes ensure efficiency, productivity, and customer satisfaction," announced Rantasalo in an editorial for the ProNews customer magazine.

The importance of welding quality was also highlighted by the fact that the customer requirements, standards, and legislation applying to welding had become much more stringent. For example, the quality management systems used at workshops were audited in greater depth than before.

As Kemppi was committed to placing the customer at the core of everything it did, the company also introduced good workshop practices in its own operations. In 2013, the company became the world's first manufacturer of welding equipment to be awarded ISO 3834-2 certification for its welding operations, a standard that is normally only granted to workshops. This proved an effective way of ensuring that the company understood its customers' businesses and was able to speak their language. Kemppi was also the first company in the world to introduce welding procedure specifications compatible with EN 1090-2 for workshop and on-site welding.

At the Welding Olympics held at the Schweissen und Schneiden trade fair in Essen in 2013, Kemppi's theme was ice-breaking – a metaphor for its pioneering spirit. The booth was built to look like an ice-breaker clearing a majestic fairway through the pack-ice. Inside the vessel's hull structure, fair delegates were able to learn about the latest technologies, products, and innovations, some of which were designed for shipbuilding and heavy industry.

Both the shipbuilding industry and heavy industry are significant customers for Kemppi. Ships are required to sail in challenging conditions and work needs to be done in unusual locations, so welding machines must be up to the task. This is one reason why the company was involved in the Arctic Material Technologies Development research project with the Lappeenranta University of Technology, the Prometey research institute from St. Petersburg, Russia, Arctech Helsinki Shipyard, and Stalatube.

The aim of the project was to develop new applications for welded steel structures that are suitable for Arctic conditions and that are commonly used in places such as ice-breakers, cargo ships, oil rigs, and oil and gas pipelines. Kemppi aimed to gain a clearer understanding of the type of work done in Arctic conditions, the true nature of the working conditions, and the things that customers working in cold conditions expect a pioneer of welding technology to provide. It goes without saying that when the mercury drops below -60°C (-76°F), welding machines need special characteristics.

Kemppi had premises including a cold room and separate freezers for product development at its site in Okeroinen, Lahti, Finland. They were used to test welding components such as tubes, cables, and mechanics.

In winter 2013, the company took several welding machines to Siberia, Russia, for trial use. Practical testing was the only way of proving that the machines would function in their ultimate operating environment.

"We tested in practice how our machines work in the extreme cold. On the drawing board, it is always necessary to make choices based on technical data. Only when the machine is used in practice can we be sure that the choices were right," says Director Mikko Veikkolainen about the project.

The welding machine's connectors were often screwed onto the machine. Veikkolainen recalls that during the first tests at a temperature of -50°C (-58°F), the cable became so stiff that in some cases, the welding machine was easier to turn than the cable. The materials were changed, and the usability of the machines was significantly improved.

In the 2010s, Kemppi also enhanced its inventory management. It worked with its main subcontractors to build an entirely new warehousing system for products sold on commission. The system transferred responsibility for most of the inventories to Kemppi's subcontractors, helping it to reduce the volume of inventories held at the factory substantially. It also made subcontractors' work more efficient. Subcontractors are able to build up a buffer

When he was a young man, CEO Ville Vuori took a year out from his studies to weld the end sections of a crane using Kemppi's equipment.

of components for volume products and store them in the intermediate storage warehouse.

The project attracted the attention of people all over Finland, and Kemppi was named the Principal of the Year at the Tampere Subcontractors' Fair in 2014. The Finnish Association of Purchasing and Logistics (LOGY) praised Kemppi's committed, long-term work to develop Finnish subcontracting.

In 2014, Kemppi received numerous other distinctions for its exemplary operations and professional products.

Kemppi's trailblazing attitude and use of new technology caught the eye of Avaus, a consultancy, which created a list of the 30 smartest Finnish companies. Kemppi ranked third. The judges were particularly enthusiastic about Kemppi's solutions for boosting the efficiency of welding production and the Welding as a Service software offering. According to Avaus, Kemppi has realized the significance of digital technology as a factor that will completely revolutionize industry and work.

Kemppi's achievements and long history in the field of Finnish business were recognized when the Finnish Federation of Family Businesses awarded Kemppi the Peter Fazer prize and the title of 'Family Company of the Year' in 2014. The award went to Kemppi Group Oy, the parent company of Kemppi Oy.

The personal approach behind Kemppi's achievements was also noted among the influential elite of Finnish management. At the VaikuttajaForum event held at Vanajanlinna Castle in Hämeenlinna in 2014, Kemppi Oy's CEO Anssi Rantasalo was named the influencer of the year in the field of Finnish machine and device manufacturers.

Russian and Ukrainian relations hit a new low due to the Crimea crisis in 2014, and this also affected the operations of Kemppi's subsidiary. The economic sanctions meant that Kemppi was no longer able to sell its equipment to companies in the oil and gas industry, among others. It was forced to seek new growth areas.

New growth was identified in the area of training. There was – and continues to be – a desperate shortage of skilled and qualified welders all over the world, including in Russia. Kemppi set out to address this shortfall in collaboration with the WorldSkills organization. WorldSkills is a competition – the world championships of young professional excellence – which competitors enter via national qualification stages. The people with the best skills in their fields compete in different categories, one of which is welding.

KEMPPI'S ACHIEVEMENTS AND LONG HISTORY IN THE FIELD OF FINNISH BUSINESS WERE RECOGNIZED WHEN THE FINNISH FEDERATION OF FAMILY BUSINESSES AWARDED KEMPPI THE PETER FAZER PRIZE AND THE TITLE OF 'FAMILY COMPANY OF THE YEAR' IN 2014.

Nowadays, Kemppi machines are used for the Russian competition. This provides brand visibility while educating top young experts on how to use Kemppi's equipment.

"When we began working with WorldSkills in 2015, things were very different than they are today. Thanks to the WorldSkills organization and Russian subsidies, vocational education is in a much better state. Schools have modernized their equipment and their teaching methods," says Evgenya Dmitrieva, who runs the Russian subsidiary.

At the EuroBLECH trade fair in 2016, Kemppi announced three new solutions that redefine performance, usability, and welding production management for industrial welding.

Thanks to its entirely new hardware and software solutions, the wireless X8 MIG Welder was able to offer outstanding performance. The machine's built-in IoT compatibility enabled it to be directly connected to welding management software. This provided welders

with digital welding procedure specifications. Usability had also received special attention. For example, the user interface was accessed using the wireless X8 Control Pad.

New technology enables welders and customer industries to make use of enhanced data sharing and the enormous potential of the industrial IoT more quickly than ever.

A handheld welding machine, which was still in the concept phase at EuroBLECH, offered a solution for sites where no electrical connection was available. The concept incorporated an MMA welding machine with a portable battery than could be charged like a cellphone and carried along to challenging sites.

In addition to the new machines, Kemppi unveiled its Gamma welding helmet and respirator system at the fair. The Gamma product range offered welders the best available protection. The respirators met the requirements of the EU's stricter TH3 classification, meaning that they were able to filter out 99.8 percent of the particles and vapors in the air.

At the 2017 Schweissen und Schneiden trade fair, Kemppi announced its vision for the future of welding. It consisted of advanced equipment, automated welding, application software, welding management systems, and human expertise.

AT THE 2017 SCHWEISSEN UND SCHNEIDEN TRADE FAIR, KEMPPI ANNOUNCED ITS VISION FOR THE FUTURE OF WELDING.

Many significant events and changes took place in 2017. For example, the Kalkkinen torch factory, which had served Kemppi faithfully, was closed down and production was transferred to Lahti. In addition, JPP-Soft was sold on.

The most significant event of the year was a change of CEO, when Anssi Rantasalo vacated the corner office after 15 years in charge. Teresa Kemppi-Vasama acted as Kemppi Oy's CEO until Ville Vuori took the helm of the old family company in October 2017 with the course set for growth and further internationalization. Vuori came to the family company from a publicly traded company.

"Family companies differ from listed companies in that family companies have their sights set further into the future than the end of each quarter. This company is also more multi-dimensional. Family businesses have an essential connection with various personal stories and characters."

The new CEO emphasizes that although the company is doing well, it cannot stand still. It needs to keep moving forward and developing new things. In addition, success is not down to an individual's performance – it is created together. This is why the famous Skemppi is needed.

Vuori has aimed to restore the focus on Kemppi's original success factor – its welding equipment. This is the origin of the story for which Kemppi is famous.

"We are a welding company, and everything is based on ease of use. It is about how a machine feels, how it works, whether it meets the welder's requirements – the requirements it needs to meet. All of Kemppi's iconic machines were created because we understand what customers want. This understanding has been formed by close contact with customers and the courage to try new things. When we are the best in the world at this, we will not have any problems over the next 70 years."

Changes also took place around the world. The Malaysian office closed its doors. A new door was opened in China when Kemppi established a robotic welding application center in Beijing. The robotic welding application centers, which include the one opened in Pune, India in 2018, display a wide range of Kemppi robotic welding equipment and robots from various manufacturers.

Kemppi has made major investments in developing robotic welding solutions. The robotic market for welding is expected to be worth USD 5.96 billion by 2023 and to expand at a compound annual rate of 8.91 percent, and Kemppi intends to be involved in this growth.

In 2018, Kemppi decided to transfer its manufacturing operations from India to Lahti and close its factory in Chennai. At the same time, it decided to open a torch factory in Wuxi, China. The aim of these measures was to enhance the efficiency of machine production and improve Kemppi's competitiveness on the torch market.

"My grandfather Martti Kemppi established the company, gave it a strong foundation, and started exporting. The next generation made the company more international – the networks of subsidiaries, dealers, and distributors that we have all over the world are testament to this. The third generation has set itself the target of making Kemppi a genuinely global business. This factory is an important milestone on this path," Teresa Kemppi-Vasama stated in her speech at the opening ceremony of the Wuxi factory.

In 2019, demo centers were opened in Delhi and Kolkata in India.

An important step towards a more global Kemppi was taken in spring 2019 when Kemppi Oy acquired Trafimet Group S.P.A., a torch manufacturer based in Italy.

The Trafimet acquisition reinforced Kemppi's torch business and supplemented its expertise in manufacturing techniques and product development. The transaction brought Kemppi over EUR 30 million in additional annual revenues, 200 more employees in five countries, over 40 years of torch production experience, and a sales network encompassing 3,000 distributors.

"The acquisition was a natural step in Kemppi's strong growth strategy. Trafimet's product range will improve the position of the Kemppi companies, particularly in secondary markets for the welding business," says CEO Vuori.

In addition to torches, Trafimet's products include welding accessories, such as welding safety equipment.

On May 23, 2019, it was 70 years since the Kemppi Brothers' general partnership was incorporated. Martti Kemppi's lifetime achievements were celebrated throughout the year at various events with customers and other stakeholders, but the biggest and most significant celebration was put on for the personnel at Sibelius Hall on May 24, 2019. Almost every member of Kemppi's personnel from around the world was in attendance to raise a glass to Martti Kemppi and to the future.

FACTS:

2010 The Kemppi DataStore concept won the Quality Innovation of the Year award.
2010 A business hub for the Asia-Pacific region was established in Kuala Lumpur, Malaysia.
2010 A production plant was opened in Chennai, India.
2014 Acquisition of WeldIndustry AS.
2016 Kemppi Arc System was renamed WeldEye.
2017 Torch production was transferred from Kalkkinen to Lahti and the Kalkkinen factory was closed.
2017 Launch of the world's first digital WPS.
2017 The Malaysian subsidiary was closed and JPP-Soft was sold.
2017 Ville Vuori began working as Kemppi Oy's CEO.
2017 A robotic welding application center was opened in China.
2017 Kempower was re-established.
2018 A robotic welding application center was opened in India.
2018 The factory in Chennai, India, was closed.
2018 A factory was opened in Wuxi, China.
2019 Acquisition of Trafimet Group S.P.A.

Attilio Imi, Trafimet S.P.A.'s CEO at the time, and Ville Vuori, Kemppi Oy's CEO, signing off the deal in Milan, Italy on March 1, 2019.

A SMOOTH HAND-DOWN TO THE NEXT GENERATION

"RENEWAL AND EXPANSION ARE WRITTEN IN KEMPPI'S DNA".

It is already the third generation of Kemppi management. The first hand-down to the next generation happened in 1978 when Martti Kemppi transferred 90 percent of his shares to his children Eija, Jouko and Hannu.

The next hand-down took almost 20 years and was completed in Hannu and Jouko Kemppi's families in 2014. It was done in three phases, the last of which was activated when Jouko Kemppi, who was Chairman of the Board, announced in the spring of 2013 that he was going to retire. The next year, Antti Kemppi started as the Chairman of the Board of the parent company Kemppi Group and Teresa Kemppi-Vasama as the Chairman of the Board of Kemppi Oy.

The hand-down started in 1996 when Jouko and Hannu Kemppi donated a majority of the shares to their children Teresa, Kimmo, Antti and Nina, while retaining voting power. In 2007, also the voting power was transferred to the cousins.

"The third phase was a mental hand-down. Dad retired, and Hannu had already left Kemppi Oy's Board. At that point, we as the next generation had to consider our roles in the company," says Teresa Kemppi-Vasama.

For Antti, it was always clear he wanted to make a career at Kemppi, but for Teresa, it was not. She first worked at Accenture and then at the Finnish Red Cross as a development director and member of the management team.

"Antti came to see me in Helsinki and wanted to find out my willingness to continue the family business. I realized that I'm serious about Kemppi and I want to play this hand. At that point, we made the decision that of our set of cousins, at least we will take an active role in the company."

The hand-down to the next generation at Kemppi has been very smooth, and it often serves as a case in point of a successful change of generation. The thanks are due to Hannu Kemppi.

"Dad was the key architect in planning and implementing the hand-down to the next generation," Antti Kemppi says.

The third generation received a great deal of responsibility at a young age. That is why they have seen it as a good thing that the hand-down was a long process. They have grown into responsibility and ownership gradually.

Both Antti and Teresa characterize themselves as circumspect and patient leaders, but when needed, they are also able to make bold decisions very quickly.

"Renewal, growing the business, and expansion are written in Kemppi's DNA." This cannot be achieved without the courage to make also radical decisions," says Teresa Kemppi-Vasama.

In Eija Vartiainen's family, the hand-down to the new generation has been completed as far as necessary. Both Eija and her son Petri Vartiainen are members of the Group's Boards.

There are also other family members in the second and third generations that sit on the Board of the parent company Kemppi Group Oy.

Kemppi Oy received the Peter Fazer prize and the title of 'Family Company of the Year' in 2014 in Finland. The prize committee emphasized the company's international success in its selection criteria. *"The company's strong market position is the result of a combination of long-term investments in technology, sales and marketing. The family has also planned and implemented hand-downs to the next generation with a long-term approach,"* said the chairman of the prize committee Pekka Laitinen when discussing the selection criteria.

The prize was accepted by Teresa Kemppi-Vasama and Antti Kemppi, who had just joined the company management.

Antti Kemppi started as the Chairman of the Board of the parent company Kemppi Group and Teresa Kemppi-Vasama as the Chairman of the Board of Kemppi Oy in 2014.

GLOBAL GAME

As long as 70 years ago, the Kemppi equipment built by the brothers gained reputation as functional and reliable machines, and they quickly expanded their clientele across Finland. It has been a long way since those early days. The journey has been filled with countless machines, innovations, successes, experimentations, and conquering markets and continents.

Kemppi is a long-standing technology leader. It has always known how to get close to the customer, anticipate needs and provide solutions that have helped to improve welding and make it more efficient. If a customer has had a problem, Kemppi has worked to find a solution. Besides new technologies, Kemppi has developed machines that have been ahead of their time.

But the world has changed in seventy years. The ultimate question is: where is it going? Where and how will welding be done in the future? The word of the day on the market is automation. It means improved productivity, different mechanization solutions, and smarter machines.

New and challenging alloys are also entering the markets. Welding them takes top-of-the-line machines that can be used to solve demanding welding problems. For Kemppi, this is not a problem, it is a challenge, because Kemppi has traditionally been good at manufacturing power sources. As Tapani Mäkimaa, the developer of inverter technology, said in his interview: *"When you are working on something difficult, you really have to think about how to tackle it. And the more complex the problem becomes, the more thoroughly you think it through."*

Also the markets are facing a turning point, and changes happen quickly. The Americans are strong on their continent, but they also have their eyes focused on Europe. The Chinese are constantly developing their own technologies and looking for potential partners and companies to acquire to help strengthen their position.

"GRANDPA'S INSTRUCTION WAS TO ALWAYS HIRE PEOPLE WHO ARE WISER THAN YOURSELF, AND WE HAVE MANAGED TO DO THAT."

Kemppi's management team and board are closely monitoring this global game. To make it in the game, you also have to be interested in what is trending in other industries and consider how these trends affect customers and Kemppi. Luckily, the desire and courage to develop and grow the company with an open mind runs in the Kemppi family. The company has been profitable throughout the 2000s and wants to stay on this path.

The third generation is under positive pressure. It must create the next phase of the company, but this is not much of a concern.

"Grandpa's instruction was to always hire people who are wiser than yourself, and we have managed to do that. We have over 800 top professionals in Finland and abroad. We have a good can-do culture and that's where we will find the talent and passion to surprise our customers also in the future," say Teresa Kemppi-Vasama and Antti Kemppi.

Kemppi's management team at the opening ceremony of the Wuxi factory in November 2018:

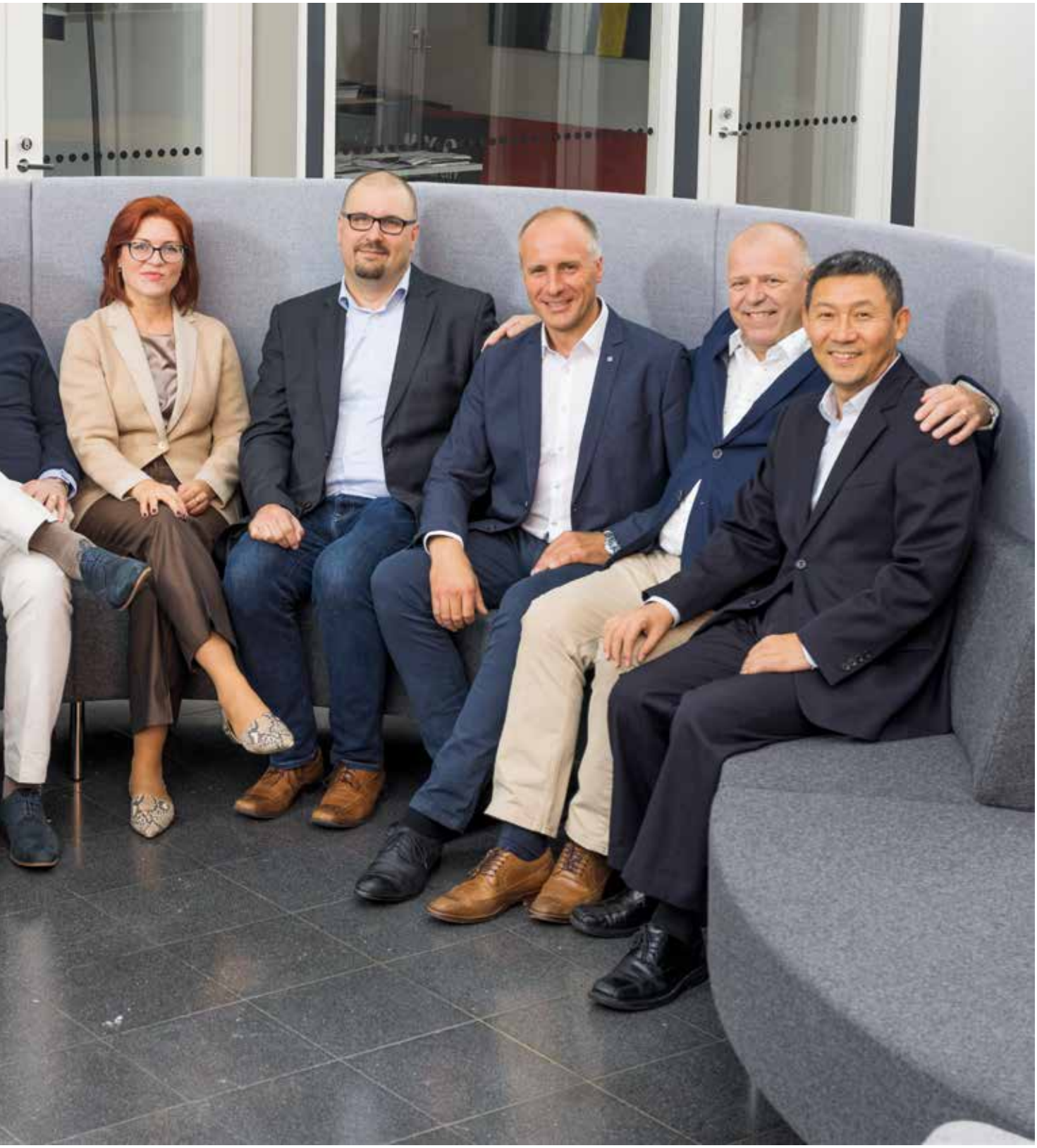
Terhi Laari, Chief Financial Officer

Hannu Jokela, Vice President, Export Sales & Global Customer Service; Managing Director, Kemppi UK
Ville Vuori, CEO
Mika Kuusela, Vice President, SCM
Katri Sahlman, Chief Operating Officer
Petteri Jernström Vice President, Product Management and Development
Mikko Väisänen, Vice President, Global Project Sales & Domestic Sales

Pekka Airola, who started as the Vice President, Operations of the Lahti business unit and joined the management team in summer 2019, is absent from the photo.

KEMPPI HAS POSITIONED ITSELF AS A PREMIUM BRAND, A TECHNOLOGY LEADER, AND A QUALITY MANUFACTURER AND SUPPLIER ON ALL MARKETS.

The leaders of Kemppi's subsidiaries in fall 2018: Rashmi Mohapatra (India), Slavi Ditchev (France), Erik Fusdahl (Norway, Sweden, and Denmark), David Green (Australia and New Zealand), Evgeniya Dmitrieva (Russia), Janne Karppinen (factory in Wuxi, China), Jakub Zygmunt (Poland), Hannu Jokela (the United Kingdom), and Frank Geng (China). Max Bleijswijk, who is the director of the Benelux countries, and Joachim Kalwe, who runs the German subsidiary, are absent from the photo.



Stories about Kemppi

Stories about Kemppi, Kemppi's employees, product development, and global conquest. About the famous spirit of encouragement at Kemppi "Skemppi". About perseverance and doing good. Stories about why Kemppi is how it is.

LESSONS FROM THE RECESSIONS

"THAT'S WHEN WE NEEDED TO BE CREATIVE AND FIND A WAY OUT OF THIS."

Seventy years of history include upswings and downturns. Small downturns and upticks are normal fluctuations in the business cycle. However, the major recessions, as well as the boom years of the early 2000s when the factory worked in three shifts, were important parts of the company's history.

The worst post-war recession was the one in the early 1990s. It caused the collapse of banks and corporations, leading to a dramatic drop in GDP and large-scale unemployment.

Between 1991 and 1993, Kemppi made losses amounting to 100 million marks, and the number of employees fell by half. The company initially resorted to temporary lay-offs, but, as the recession went on, it was forced to make people redundant. The company underwent restructuring four years in a row. It ran out of equity and had no collateral. Hannu Kemppi spent night after night running through various calculations. He spent the days engaged in tough negotiations with the bank, trying to find a solution to the situation.

"Russian exports had been going so well, and we had warehouses full of machines. We stopped production at the factory and trained our personnel to sell the machines. After that, we focused on selling the products in our inventory to generate some cash flow," Hannu Kemppi recalls.

Following several painful restructuring processes, the company was back on track. Some of the manufacturing was transferred to subcontractors. The company took a firmer grip on sales in-house, and the network of Kemppi sales companies was expanded beyond Europe. Once the company's survival was assured, Jouko and Hannu Kemppi decided to hand the business down to the next generation in 1996. They donated a majority of the shares to their children, but they retained voting power.

The next recession would hit in the 2000s when the banking and financial crisis, which began in the United States, reached Finland in 2008. There was a day when the factory did not take a single order. That was the moment when time stood still. In 2009, Kemppi's revenues fell by almost one half, and the number of staff in production decreased by more than 100 over two years while the company rationalized its operations. However, the company survived the crunch intact.

The next round of adjustments would be required in 2015 and 2016. These were spurred by the uncertain market and economic outlook. Although Kemppi was in a strong financial position, the revenue and cost trends were worrying. The company wanted to react in time by adapting its operations to a climate of lower demand.

The recessions were the best kind of business consultant for Jouko Kemppi. They forced him to decide which core functions should be kept firmly in-house and which could be delegated to subcontractors. "*The downturns forced us to think differently. That's when we needed to be creative and find a way out of this."*

Antti Kemppi, a third-generation entrepreneur and currently the chairman of the Board of Kemppi Group Oy, shares this sentiment. "*The bad times made us focus on what works well and allowed us to clear out all of the unnecessary things that were tying up money. Returning to our core activities has been one of Kemppi's cornerstones and success factors. It has helped to keep us on the path to the top*."

The company has always survived downturns.

In 1993, the Essen trade fair marked a significant turn in the history of welding machines. It was at this fair that Kemppi announced its Kemppi Pro system, making it the first company in the world to introduce digital control for welding machines. Kemppi also demonstrated its new Master product range for TIG welding. The Master devices were the first to use IGBT technology.

SKEMPPI!

THE FACTORY ORGANIZED AN ANNUAL ATHLETICS COMPETITION, WHICH, AT ITS PEAK, INVOLVED MORE THAN 200 KEMPPI PERSONNEL.

The company's employees have always been an active bunch. That is why it was natural for Kemppi to hold a relay race in the factory grounds in honor of the company's 70th year in business.

Over the years, Kemppi employees have played soccer, tennis, floorball, and basketball and taken part in swimming and the Finlandia cross-country skiing marathon. It all began in Pekanmäki. Back then, the lunch hour lasted a whole hour. There were two sports fields outside, and whenever there was a break, there was also a game. At that time, employees also formed company teams for various sports. Companies and factories used to compete against each other in different sports. Victory was a matter of honor, pride, and reputation, and the teams fought tooth and nail for first place. Kemppi had soccer, baseball, and volleyball teams. Its employees also performed well in cross-country skiing and athletics competitions. Martti Kemppi was a familiar sight in the stands, where he would cheer on the company's teams. Jouko and Hannu Kemppi often took the field themselves.

When teams were not busy flying the Kemppi flag against other companies, employees kept themselves in shape in Kemppi's various clubs. Kemppi's clubs were founded in 1968 to support leisure activities, and they lived through a golden age in the 1970s and 1980s. In addition to traditional sports, there were clubs for bowling, shooting, and indoor exercise. Staff leisure activities gradually expanded to cover music and photography. There was a separate club for women known as the Kimuli club, which organized activities such as trips to the theater. In the best years, there were nearly 20 different clubs.

The factory also organized an annual athletics competition, which, at its peak, involved more than 200 Kemppi personnel. The departments competed against each other in races around the factory, and this was a further factor in fostering a strong team spirit. Team members supported their own departments, and the winner assumed the all-important bragging rights in the factory. The last athletics competition was held in 1986.

The highlight of the winter was the Finlandia cross-country skiing marathon. Kemppi's employees were encouraged to enter – the company paid the entrance fee – and an after-party was held at the famous Kemppi guest house. It was a great place for swimming, dining, and going to the sauna. The highlight of the evening was a draw for a weekend trip to the Ylläs ski resort in northern Finland, with the winner chosen from among the entrants to the Finlandia cross-country skiing marathon.

At one point, Jouko Kemppi grew concerned about the decline in the number of people entering the skiing competition. He wondered out loud whether the company should set its sights further afield and go on a skiing

trip abroad. The next year, seven Kemppi employees bought tickets for a skiing holiday in Italy. The trip had important long-term effects. For example, Jani Mäkäläinen, the Development Manager at the electronics factory and the chairman of the Kemppi clubs, has three stamps in his Worldloppet (Ski Around the World) passport. Real Estate Manager Jari Manninen has eight stamps and aims to achieve the title of Worldloppet Master. This is granted to people who have skied ten Worldloppets.

Another event worthy of mention is the 40th friendly match between Kemppi and its former supplier, Reka Kaapeli Oy, held in 2018. The companies meet for a soccer match, alternating between each other's home arenas each year. Last year, the championship was underscored by the fact that Seppo Korhonen, who played on the winning Kemppi team, has featured in the line-up in every match.

Kemppi's clubs are still going strong, but there are fewer of them nowadays. After a quiet few years, they have risen in popularity and new clubs are being set up. In addition to clubs, Kemppi incentivizes its personnel by giving them cultural and sports vouchers. The Finlandia skiing tradition is still alive.

PAY IT FORWARD

Kemppi's millionth welding machine, a Master MLS 2500, was produced in 2001. The milestone was celebrated by donating the machine to the Finnish Red Cross. Welding machines are important tools in crisis zones, and the machine became one of the items of technical equipment in a field hospital.

Ever since Kemppi was established, it has taken its fair share of social responsibility – donating the welding machine to the Red Cross is just one example of this. For example, the staff summer parties, which were held annually until 2016, featured light-hearted competitions as well as good food and great company. Competitors were asked to pay a small entrance fee, as the summer sports days were intended to have a deeper meaning than simply encouraging staff activity. The day involved collecting money for charitable causes. At the end of the day, Kemppi made a donation to match the amount collected from employees. The funds were donated to a different charity every year. Money had been given to causes such as the relatives of people suffering from dementia, the victims of an earthquake in China, and the children's ward at the central hospital. One year, the charity was the Lake Vesijärvi Foundation. Kemppi is one of the founding members of the Lake Vesijärvi Foundation, which was established in 2007. The foundation promotes the management of Lake Vesijärvi and the other lakes in the Lahti region.

Kemppi Oy is also among the 16 founders of Design Foundation Finland. The foundation was established in 2009 to collect and distribute funds for design research, education, and development work in Finland.

In 2018, Kemppi Group donated a substantial sum of money to the development of collaboration between the Lahti University of Applied Sciences and companies to lower the threshold for students to find employment in companies.

Kemppi has always been generous with its time. Back in the day, Martti Kemppi was well known as one of the architects of the rise of Finnish entrepreneurship. Jouko Kemppi was active in the area of sports, and Kemppi Oy has supported local events for children and young people for many years.

Teresa Kemppi-Vasama plays an active role in developing education in the field alongside her own work. Among her many positions, she in the deputy chair of the board of LUT University. This is the only university in Finland that conducts research into welding technology.

The company has long donated its Christmas card money to good causes, and Kemppi and its employees have collected money to build a safe-house for girls in Kenya. The NicePlace Kemppi house, which opened its doors in 2004, can accommodate 120 girls, enabling them to live in a safe place during the periods of their lives when they are at risk of suffering female genital mutilation. The girls living in the house can also go to school. In Kenya, children often have long and dangerous journeys to school.

Every year, Kemppi's Christmas card money has been donated to a good cause. In 2012, the company supported the rainforest of Borneo with a clever message incorporating the idea of root welding. One of Kemppi's distributors in Germany was behind the funny image.

The text on the card read:

"Our operating environment is the entire globe, and we want to make sure that it can continue operating. If it were possible to weld the rainforests back into shape using a cellulose electrode and root welding, Kemppi would be the first company in the world to develop a machine to do it.

However, it is not that easy to repair destroyed rainforests – it requires many entities to work together over the long term.

We aim to play our part in this work, and our Christmas donation this year will support the WWF's "Heart of Borneo" field project, which aims to protect the Muller-Schwaner mountain forests in Indonesia."

Kemppi challenged its entire personnel to collect money to build a safe-house for young Kenyan women. Some of the proceeds of Kemppi's summer parties were also donated to NicePlace Kemppi for several years. The donations enabled the house to be extended and additional furnishings to be purchased.

Summerparty

The playful but competitive atmosphere at Kemppi's summer parties where money was collected for charity.

Left: Jouko Kemppi, Lasse Aaltonen, Anssi Rantasalo, Jarkko Jokinen and Hannu Jokela as mermaids sinking into the waters of Lake Vesijärvi.

Right: a masterclass in the Minarc kicking & throwing competition: Elina Suomalainen, Eija Siikonen, Tuomas Kivisaari, Pekka Nousiainen and Miikka Hurmalainen.

WORKING WITH EDUCATION INSTITUTIONS **AROUND THE WORLD**

Kemppi is building is brand loyalty around the world in several ways, including its work with various educational institutions. At the same time, the company aims to overhaul the outdated public perceptions of the welding industry and train future experts to weld using modern equipment and cutting-edge technology. By working with educational institutions, the company is also helping to ensure that there are enough qualified employees in a sector suffering from dire labor shortages around the world.

Rashmi Mohapatra, the subsidiary manager of Kemppi India, has conducted several different projects with universities and other educational institutions over the years. Among other things, Kemppi India has helped universities to establish centers of welding expertise in various parts of the country. It has supported institutions in their equipment procurement activities and trained teachers to use the new devices.

"In India, the educational programs and the equipment in use are irredeemably outdated. When students graduate and start looking for jobs, their competences do not meet the needs of companies. However, this is gradually beginning to change."

Mohapatra has also been involved in developing curricula in the field.

Mohapatra finally realized a long-term goal in 2018 when Kemppi and the Indian Institute of Welding, which specializes in promoting welding technology, arranged a national welding competition for women. The competition featured 18 female students and professionals vying for the title of Best Female Welder in four different categories. Mohapatra believes that encouraging women to work in the sector will improve their positions as entrepreneurs. Women also work well in jobs that require precision and care.

Kemppi India has also been involved in a couple of prison projects, in which it trained prisoners to weld. Upon their release, the prisoners have a profession to go to and the chance to earn a livelihood through honest work.

A large amount of research is conducted in the field of welding technology in Russia, where a huge number of welders are being trained. However, the situation in Russia is broadly similar to that in India. The welding laboratories at vocational colleges are full of old machines, and recent graduates struggle to compete in the labor market.

Evgeniya Dmitrieva, the subsidiary manager of Kemppi Russia, has worked long and hard to persuade colleges to modernize the tools and equipment they use to teach welding, and she has raised awareness of Kemppi among educational institutions.

"Kemppi's machines mean that students have a better chance of finding employment. By using these machines, they get to work with the latest welding technology and the best equipment on the market."

In many schools, the pupils who have performed well enough in their studies are allowed to use the Kemppi machines. Everyone else has to use the old machines.

The winners of a national welding competition for women in India.

In 2015, Kemppi began working with the Russian WorldSkills organization. WorldSkills is an international non-profit organization that arranges skills competitions for young experts in various fields in 75 countries. Welding is one such field, and the Russian WorldSkills competition requires competitors to weld using Kemppi machines. This form of collaboration provides brand visibility while educating top young experts on how to use Kemppi's equipment.

"We aim to promote the development of the welding industry and foster opportunities for young people to develop their skills with advanced welding equipment and digital technologies."

In addition to the WorldSkills competitions in Russia and India, Kemppi has worked on competitions in other countries, including Finland and Norway. The company is the chief sponsor of the EuroSkills championships, which will be held in Austria in 2020 and Russia in 2022.

FROM ELEMENTARY SCHOOL TO UNIVERSITY

"If I don't make it as a YouTuber, I'll come and work for Kemppi," stated one 13-year-old girl from Lahti on a visit to Kemppi's electronics factory. This is why Kemppi has worked with various educational institutions for decades – to get young people interested in the technology industry.

Every year, more than 100 young people visit Kemppi while they are writing their theses, studying for a qualification or part of a qualification on an apprenticeship contract, working a summer job, gaining work experience, or completing internships. Some of these young people only visit once, while some gain an interest in the industry and go off to study it, eventually returning to Kemppi as employees.

"We have succeeded in building a viable pathway from education to working life with educational institutions of every level," Teresa Kemppi-Vasama says. She serves as the deputy chair of the board of LUT University. LUT is the only university in Finland where students can study welding technology, and it is an important educational partner for Kemppi.

The company began working with educational institutions back in Martti Kemppi's time. For the past 18 years, Jukka Mandelin, the Personnel Supervisor, has been responsible for this area of collaboration. He has witnessed the occasional fluctuations in the popularity of the technology industry as a workplace, but one thing has remained constant: There are never enough good workers. The purpose of working closely with educational institutions is to increase the number of future Kemppi employees, inspire young people to work in the technology industry, and advance the Kemppi brand.

Kemppi began its partner class scheme with Lahti comprehensive schools back in the 1980s. The period of collaboration with each partner class begins in the seventh grade and continues until the spring of the ninth grade. Over these three years, Kemppi shows the school pupils all of the different types of work the company has to offer, from assembly to marketing and product development. Pupils have the opportunity to gain work experience at Kemppi, and some of them get summer jobs at the company. Once in the three-year period, a parents' evening is held at the factory. This provides the parents with the chance to try their hand at welding and learn more about Kemppi as a company.

For upper secondary schools, Kemppi has developed a work experience course, which is offered in one upper secondary school in Lahti at a time. The day-long course allows teachers and pupils to familiarize themselves with marketing, design, and – naturally – welding at Kemppi's factory. The course has received a large amount of positive feedback from pupils and teachers.

Every year, young people join Kemppi to complete part of their studies, either on apprenticeship contracts or training contracts. A few motivated young people are offered the opportunity to complete the Kemppi Diploma alongside their studies. This qualification is an extra study module specifically for engineer-fitter students, who receive a diploma when they pass.

The Kemppi Diploma teaches young people how welding machines are made and provides them with an understanding of every aspect of the process. The Diploma is widely respected among companies, so it is a strong addition to an applicant's resumé.

Kemppi is also a visible partner in the Taitaja competition. The top experts of the future battle it out at the Finnish championships in approximately 45 different professional fields. Welding is one such field, and Kemppi machines are used for the competition.

Kemppi has provided valuable sparring for young people who have done well in the competition by training them at Kemppi's welding academy.

"This is long-term work that will bear fruit in the future," Jukka Mandelin says.

A partner class visiting Kemppi – class 8B from the Kärpänen koulu school in 2014.

Personnel Supervisor Jukka Mandelin works with institutions at every stage of education. This collaboration is one way of ensuring good employees are available in the future.

Jukka Mandelin and Taina Immonen in the foreground. OpeTET – a period of work experience for teachers at Kemppi.

AND THE WINNER IS **KEMPPI**

THE MINARCMIG ADAPTIVE 180 WELDING MACHINE WAS AWARDED THE INTERNATIONAL RED DOT DESIGN PRIZE IN 2006.

"The number of winds on the coil is equal to 40 times the output voltage from the transformer divided by the cross-section of the transformer core." This was Martti Kemppi's formula for a welding transformer, and it was the spark that ignited 70 pioneering years of work in the welding industry, making Kemppi a trendsetter for the entire industry while it swept up numerous prizes and honorable mentions along the way for its innovations and the usability of its products.

Kemppi launched a MIG/MAG welding machine in the 1960s. The world's first inverter power source saw the light of day in 1977. The Multisystem was launched in the 1980s. In 1993, Kemppi became the first manufacturer in the world to make the leap from analog to digital welding technology.

In 2006, the MinarcMig Adaptive 180 welding machine was awarded the international Red Dot design prize, which is one of the most prestigious awards in industrial design. The panel of judges was impressed by the innovative, practical, and ecological nature of the equipment, along with its quality and ergonomics.

The FitWeld 300 welding machine and SuperSnake GT02S subfeeder have received honorable mentions from Red Dot.

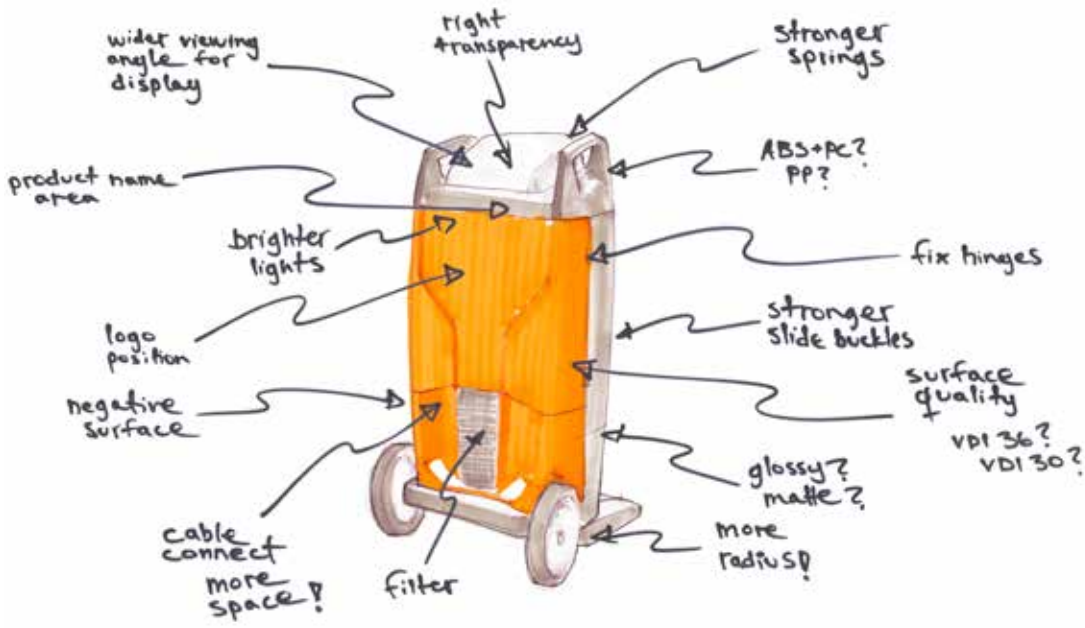
In 2008, Kemppi introduced the Kemppi ARC System, which reduces the number of imperceptible welding defects. In 2010, the Kemppi DataStore concept won the Quality Innovation of the Year award.

DataStore is an online welding store, which sells items such as welding processes for download. The Kempact RA product range won the iF Product Design Award 2012 in the industrial product design category for its innovative design language and practical functionality. The competition is one of the world's oldest and best-known design competitions.

In 2014, Kemppi made the world's first mobile app for controlling welding equipment. It can be connected to the FastMig welding equipment, which was designed in the time before smartphones. In 2016, Kemppi launched the world's first IoT welding device, the X8 MIG Welder. This device has a built-in internet connection, so the user can retrieve the necessary welding procedure specificationsfrom the cloud. The data measured during welding is saved on the cloud, where it can be analyzed.

In addition, Kemppi was the first welding equipment manufacturer in the world to be certified in accordance with the ISO 3834-2 quality standard, which is widely used in engineering workshops.

The core team behind the winning MinarcMig Adaptive 180: Pasi Hiltunen, Jani Hämäläinen, Jarkko Havia, Hannu Jokela, and Jonne Valola.



LESS IS MORE

Martti Kemppi's principle was to listen to customers' needs and fulfill them. The lack of raw materials in post-war Finland forced Martti to be inventive: the simpler the equipment, the less material that is needed.

User-orientation and inventiveness remain the starting points for product development. The company must understand the customer's needs and do it better than its competitors.

In usability, less is more. When you find the simplest possible solution, it is usually useful for everyone. However, simplification does not mean giving up on features. Customers expect Kemppi to provide technical leadership. A focus on usability has been promoted alongside this.

Kemppi's User Experience Manager Jussi Kapanen says that good usability means understanding the mindset of the target group. You need to know what users spend their days doing and what they need the equipment for. Only then can you think about how you can improve the story. For example, which features could make the work easier or faster?

Since the very beginning, Kemppi has had the capacity to reinvent itself in accordance with users' worlds. One good example of this is the user interface. In the 1960s, when a welder wanted to listen to music on the radio, he would turn the volume up as far as it would go. Nowadays, with a few taps on a touchscreen phone, the welder cues up a podcast to listen to while they work. In the same way, Kemppi's welding equipment used to work with manual knobs and dials in the 1960s. The newest machines have consigned manual controls to history and replaced them with mobile apps.

Since the very beginning, Kemppi has had the ability to reinvent itself as users' environments change. One good example of this is the user interface. In the 1960s, when a welder wanted to listen to music on the radio, he would turn the knob to turn up the volume. Nowadays, with a few taps on a touchscreen phone, the welder cues up a podcast to listen to while they work. In the same way, Kemppi's welding machines used to work with manual knobs and dials in the 1960s. Today's machines have color displays and their software is installed through a mobile app.

"THE NEW GENERATION OF WELDERS IS GROWING UP IN A WORLD WHERE TOUCHSCREENS ARE THE NORM."

Even user interfaces need to adapt to their users. But some knobs and dials are still needed, particularly when the welder wants to control the machine while wearing gloves.

UX Manager Jussi Kapanen is an experienced user interface designer. He spent many years working at Nokia before moving to Kemppi.

FROM ENGINEERING FUNCTIONALISM TO DESIGN

PRODUCT DEVELOPMENT CALLS FOR COLLABORATION BETWEEN DESIGNERS AND ENGINEERS.

Today, design is an integral part of every product development project at Kemppi, and even in the design of components, but it has not always been this way. Since the very beginning, Kemppi has always given consideration to how its products and product ranges look, but this remained the responsibility of engineers until well into the 1980s. Nowadays, product development calls for collaboration between designers and engineers.

"*The products of that era were of the 'engineering functionalist' style,*" says Kemppi's Welding Instructor, Hannu Saarivirta, recalling the days before designers. Kemppi hired the first designers a couple of decades ago.

At its best, the collaboration between engineers and designers is a joy to behold. One of them concentrates on making sure that the internals of the product are good, while the other focuses on ensuring that the machine is user-friendly and works how it is supposed to work. Both are necessary.

"*Both parties identify different challenges in the product. In the best case, the designer is able to solve the engineer's problem and vice-versa,*" says Kemppi's Design Manager, Jari Kettunen.

In welding equipment, design goes far beneath the surface. If the designer is involved in the process from the initial stage of design, it is possible for the design to influence the production costs. The equipment must also be practical, functional, clear, ergonomic, and reliable. Esthetics are just the icing on the cake, and the time factor must also be taken into consideration. Welding machines are work tools, and Kemppi's equipment can last decades. When the device is standing on a workshop floor ten years down the line, it still needs to look like it is pleasant to work with.

Investments in design have brought Kemppi several international design awards. In 2006 MinarcMig Adaptive 180 received the Red Dot Design Award, and in 2009 FitWeld 300 welding machine and SuperSnake GT02S subfeeder received the Red Dot Honourable Mentions. In 2012 Kempact RA product family received the international iF Design Award.

Kemppi was the world's first in the field of welding to win a design award.

Jari Kettunen

THE WORLD'S **BEST MIG**

Tuesday, October 25, 2016 was a historic date. It was the morning that Kemppi introduced the X8 system to its customers and competitors. The presentation took place at EuroBLECH, a trade fair for the international sheet steel industry in Hanover, Germany. EuroBLECH is a meeting place for metalworking professionals from all over the world.

"Prepare yourself for a new era in industrial welding," went the promise on Kemppi's brochure. And the future set out by Kemppi captured the interest of delegates. Although it was just one of the 1,550 exhibitors to attend the fair from 40 different countries, Kemppi surpassed all expectations in terms of the attention it received. The X8 MIG Welder, which offers the world's best welding features, stole the show. Groups crowded round to watch the live demonstrations of everyday welding applications.

A few years previously, Kemppi's project team was given a simple target: *"Make the world's best MIG welding system."* And that is what they did. The starting point was a product designed around the needs of users and businesses. It was intended to make work easier, faster, and more enjoyable, and it needed to lead to better productivity.

Usability was a key factor. The team visited workplaces to find out what users wanted. They gained an in-depth understanding of users' work by watching, asking, and listening to them. The product development team met users in various countries in locations ranging from shipyards to pipeline work sites, from small workshops to large factories. The welders wanted simplicity and reliability.

"PREPARE YOURSELF FOR A NEW ERA IN INDUSTRIAL WELDING."

Welding engineers wanted productivity. Supervisors wanted an adaptable, all-in-one product.

The users' requests were taken to the drawing board: Options were added, eliminated, and developed, and innovations were born. There were some setbacks along the way, and sometimes it was necessary to let off steam, but nobody thought of giving up. All that was needed was some traditional Kemppi dedication, persistence, and the courage to reach for the stars. For the first time in a long time, something genuinely new was created. The devices in the X8 MIG Welder communicated wirelessly, and the machine had enough power to keep a small village up and running. The X8's first-class usability and performance represented a new dimension for the welding of challenging materials.

The user interface design was a giant leap forward in technology, launching Kemppi well ahead of the competition.

The wireless user interface and WeldEye enable digital welding procedure specifications (dWPS) to be provided for the equipment.

SUPERSNAKE IS A **SUPER PRODUCT**

SuperSnake is a genuine super product. It improves welding reach by 500% and productivity by 60%.

Jari Perkiö, who led the product development project, recalls that SuperSnake was the first Kemppi project to go through a conceptualization phase. By the time the project landed on Perkiö's desk, customers had already been asked what they needed, a couple of working prototypes had been made, and welding tests had been done. Even the wire feed mechanism was already designed in a separate product platform development project. It had been squeezed into a small package, which enabled the SuperSnake to be a compact and streamlined subfeeder.

"We were able to focus on developing the design, usability, and reliability," Perkiö recalls.

Industrial Designer Jonne Valola worked on the shape of the device while Mechanical Designer Kalevi Koivonen designed the connections. Jari Perkiö conducted the orchestra.

Customers who weld in especially challenging conditions had asked for a device that could fit into small spaces and was easy to move around and pull along without getting stuck on anything. That is what Kemppi made. The protective hose was made from an entirely new material that did not fold or stretch when fed around sharp corners, so the wire feed was not disrupted. This substantially improved the welding characteristics over long distances.

Innovations do not always need to be big. Sometimes, the little things can start revolutions. Like changing the color of the protective hose from black to orange: The SuperSnake's cable is easy to distinguish at a glance from all the other cables criss-crossing the floor.

"WE WERE ABLE TO FOCUS ON DEVELOPING THE DESIGN, EASE OF USE, AND RELIABILITY," RECALLS JARI PERKIÖ, WHO LED THE DESIGN TEAM.

Another small but significant change for users was the LED light installed inside the device. It lit up the wire feeder so that the user did not need to reach for a flashlight in order to adjust the settings on the sub-feeder.

Only when the SuperSnake was tested on a customer site in Norway did it become clear to Perkiö that they had made a very good device.

"Aker Stord's shipyard in Norway contains a lot of tight spaces where welders cannot take their equipment. We lifted the FastMig up to the top level of a block of a ship and proceeded to travel 25 meters into the intermediate floors with the SuperSnake to test the subfeeder's functionality. When the foreman realized how small and narrow the subfeeder was, he was overjoyed – he dropped the cable down a narrow opening and told the welder to go after it. That's when I felt we'd really nailed it."


SUPERSNAKE

KEEPING THINGS MOVING

The year was 2012. The new electronics factory was running efficiently, and the modernization of the old factory was complete. Production was good, but the supplier network was not working as it was supposed to. It needed to improve.

As Kemppi still places a substantial proportion of its orders with Finnish suppliers, it realized that if it wanted to serve customers better, it would need to include the entire supplier network in its development work. And develop something completely new, as Kemppi is only as strong as its supply chain.

Kemppi selected seven Finnish suppliers to take part in its project and applied to Tekes for a product development grant. The two-year project resulted in a new warehousing system for products sold on commission, leading to Kemppi being named the Principal of the Year at the Tampere Subcontractors' Fair in 2014.

When the warehousing system was deployed, a substantial amount of Kemppi's warehousing was delegated to subcontractors: Kemppi's main suppliers kept enough goods at a Posti warehouse to cover about three months' demand.

A delivery truck (known as the milktruck) shuttles between the warehouse in Kujala and Kemppi's factory three times a day. It supplies the factory with the materials and components that it needs at the time in question. Information about the required components is sent to the sourcing department via the enterprise resource planning system. It communicates what needs to be ordered for each shelf location along with the time scale necessary to ensure that production continues without interruption. In the future, an automatic forklift truck will handle deliveries from one place within the factory to another.

The old adage, *keep everything moving*, also applies here. After the "milktruck" has brought the components that the factory needs, it is loaded up with assembled equipment to take to the Posti warehouse, from where they are shipped on to customers.

KEMPPI HAS SUCCEEDED IN SIGNIFICANTLY REDUCING THE VOLUME OF INVENTORIES HELD AT THE FACTORY.

Thanks to this warehousing system, Kemppi has succeeded in reducing the volume of inventories held at the factory. Customer service has also improved as changes can be made to components according to customers' wishes right up to the last moment.

This also makes subcontractors' work more efficient. For volume products, they are able to build up a buffer of components and store them in the intermediate storage warehouse. The project has led to a new level of commitment between Kemppi and its Finnish subcontractors, as Teresa Kemppi-Vasama said when she accepted the Principal of the Year award: *"Without our subcontractors, we would be nothing."*


KEMPPI
KEMPPI
KEMPPI
The Joy of Welding

A PIONEER IN SPONSORSHIP

Kemppi is one of the few Finnish companies to understand the value of sponsorship. Particularly the fact that it means much more than getting a logo on a baseball cap or a patch on an overall.

Kemppi's partnerships with Formula One teams began in the last millennium when John Frost, Sales Director at the U.K. subsidiary, made a marketing partnership agreement with the Jordan Grand Prix Formula One team. In practice, the agreement meant that Jordan used Kemppi's Mastertig AC/DC welding machines, and Kemppi benefited from a boost to its image. For example, Kemppi has run impressive advertising campaigns in welding publications in Germany.

Kemppi was the official supplier to the Jordan Grand Prix team from 1998 until the team was sold, first to Midland and then to Spyker.

Changing the sponsorship partner from Midland to Spyker also meant changing colors. Midland's red and white was swapped for a mixture of orange and silver.

"*Kemppi's logo was in a prominent position on Spyker's orange cars,*" recalls Sales Director Hannu Jokela.

At around the same time as Kemppi established its subsidiary in India, Spyker was sold to a new owner. The F1 partnership continued with the team's new owner, Vijay Mallya.

"*Everyone in India knew Mallya. He was a billionaire, and he owned several large breweries in addition to the Force India racing team. The aim of the partnership was to raise awareness of Kemppi in India first and foremost, but it also had a global impact for us.*"

Kemppi has always supported promising Finnish youngsters. The most famous of them is Valtteri Bottas.

When Kemppi signed a multi-year sponsorship agreement with the 16-year-old Valtteri Bottas in 2006, Bottas was at the beginning of his journey to the peak of motorsport. Continuously searching for sponsors was sapping the young driver's time and energy, but he could not compete without money, and the further he wanted to go, the more he would need.

A document was signed in Kemppi's corner office which extended all the way to Formula One. It set out the years, classes, and sums. The years came to fruition, but the classes and sums changed when the driver partnership was switched to a team partnership with Williams. It was an incredible journey.

"*My multi-year partnership with Kemppi enabled me to progress from karting to the next class up. Kemppi could see how determined I was to succeed,*" Valtteri Bottas recalls.

According to Anssi Rantasalo, who was Kemppi's CEO at the time, the most important aspect of sponsorship is what happens in the background. At best, it creates unique experiences for important customers and stakeholders which they would otherwise miss out on. For example, customers could have the opportunity to go for a drive in a Formula One car with one of the team's drivers at the wheel or products could be launched at the team factory.

Bottas' time at Williams was an intensive period for Kemppi. The company made effective use of sponsorships. Rantasalo estimates that during the four-year partnership with Williams Kemppi took more than 150 significant customers to various parts of the world.The company succeeded in providing them with unforgettable experiences and offering five-star VIP treatment.

"*It is difficult to measure the direct causal relationship to revenue growth and profitability, but the relationship that was created with these customers is irreplaceable,*"

"I REMEMBER THE FIRST TIME VALTTERI CAME AND SIGNED AUTOGRAPHS AT THE KEMPPI CANTEEN. BACK THEN, NOBODY COULD HAVE PREDICTED WHAT HE WOULD GO ON TO ACHIEVE."

Rantasalo says.

The icing on the cake was the sheer number of column inches and seconds of exposure in various media. Public visibility was an advantage for the brand and the employer image.

Sponsorship also works as an internal motivator. Numerous Kemppi employees have followed Valtteri Bottas' story, starting out as a determined young boy and making it all the way to the top. Bottas often made an appearance at Kemppi's summer parties, and a staff family day was arranged for the Valtteri Bottas Duathlon.

"*I remember the first time Valtteri came and signed autographs at the Kemppi canteen. Back then, nobody could have predicted what he would go on to achieve,*" Rantasalo says.

Kemppi also engaged in technical collaboration with the Williams team. For example, the team used Kemppi equipment for welding.

Although it may seem that a welder and a Formula One driver have little in common, this is far from the truth. Managing welding is almost the same as managing Formula One cars. F1 cars contain about 100 different sensors that generate thousands of different measurements. The data is analyzed, and the results are used to consider how the team can ensure it succeeds. In principle, welding involves doing the same thing: collecting all the information and data, which can then be used to make better decisions and improve productivity, quality, and speed.

One memorable advertising campaign from that period featured Valtteri with a Pelicans player and a Kemppi welder. They were all wearing helmets. The message was clear: *When a Finnish person has a helmet on, he will do fine.*

FROM PURCHASING TO STRATEGIC SOURCING

When Toivo Juntunen came to Kemppi to work as a buyer in 1973, Kemppi had three buyers. The components and products that Kemppi sourced were divided between the buyers according to their educational background and experience. The idea was for each buyer to be an expert in his/her field and have the best idea of what to buy and where to buy it. It worked well back in those days.

Many other things were different in the 1970s. Juntunen recalls how, in the good years, the buyers needed to buy goods for the following year at the end of November for tax reasons.

"It was a tough job because we had to find components for the upcoming months worth several million Finnish marks from suppliers around the world."

The sourcing functions underwent their first major change in the 1990s. Whereas each buyer used to search for potential suppliers of materials or components all around the world, the company began using a full-time scout to analyze the markets in the 1990s. The internet brought materials, factories, and suppliers within reach.

The next big change took place in the 2000s. The world became more globalized and open. Buyers were able to view an incredible number of different suppliers from countries such as China, ask them for prices, and conduct preliminary analyses of the components on offer.

Today, sourcing is divided into two parts. Kemppi talks about strategic sourcing and operative buying. Strategic sourcing means looking for materials. Kemppi is constantly searching for better, more cost-efficient material sources around the world.

The materials that need to be sourced are divided into electronics and mechanics. Each material category has a Category Manager who oversees purchases.

THE INTERNET HAS OPENED UP AN ENORMOUS RANGE OF OPPORTUNITIES FOR SOURCING.

The Category Managers work closely with the product development team, as new products also bring new challenges. Thinking about the components that will be used in a machine is an important aspect of design, and collaboration begins when the product is first being visualized. The worst thing is being completely dependent on a single supplier. What if a component is not durable or the company that makes it goes bust? That is why the sourcing department starts assessing what is available around the world, where it can be bought, and at what price – right at the beginning of the design process.

Collaboration between product development and sourcing is also important in a technical sense. Products are constantly becoming more complex, and components are increasingly challenging and demanding. In terms of quality, it is important for the designer to be at the factory and see how components are manufactured and how they should be used.

Another major change in the 21st century is the precise tracking of material flows. Tracking enables optimization of materials, ensuring that the quantities are not too high or too low, so there is just the right amount of material at the right time.

Toivo Juntunen is a long-term Kemppi employee. He started working as a buyer at Kemppi in 1973 and retired 2006.

The Joy of Welding was presented to a large audience at the TechniShow trade fair in the Netherlands in 2002. Local companies have come up with successful publicity stunts for trade fairs, and, this time, about 10,000 Baltic herrings were handed out to delegates. Baltic herring is a popular fish in the Netherlands. The ProEvo and MasterTig products were the big draws of the week-long fair.

Assistant Meeting 2006.
Manuela Bubenzer (formerly Fuginski) learning to weld at Kemppi's booth.

Jaime Iturra and Patricio Alegria at a welding demonstration at Kemppi's warehouse in Chile in 2008.

The Martti Kemppi Building in Bedford is the headquarters of Kemppi U.K.

The Nordic World Ski Championships in Lahti in 2017. Kemppi's international guests were invited to see the company's new products and then had the opportunity to follow the competition.

Kemppi's eye-catching stand at the 2017 Schweissen und Schneiden trade fair depicted an old workshop with futuristic equipment and the video about future welding. Pictured: Kemppi's stand personnel on the first day of the fair. The traditional "Essen fair" was held in Düsseldorf this time.

Kemppi's personnel lined up for a photo under the direction of Sales and Marketing Director Frederic Lanz (right).

Pekka Airola is responsible for Kemppi's production, product development, and after-sales service. He was responsible for the revamped MasterTig product range, which was launched in 2019.

In 2017, Kemppi organized a competitive Hackathon event for students, where they worked in teams to code a cloud service that would improve occupational safety. Two members of the winning team have since been employed by Kemppi.

KEMPOWER'S POWER SOURCE RUNS THE CERN PARTICLE ACCELERATOR

When the European center for research into particle physics (CERN) was looking for the world's best suppliers of power sources in the 2000s, Kemppi's affiliated company Kempower received a phone call. Martti Kanervisto and Lauri Kärävä spent many a long hour in negotiations, working on prototypes, and submitting competitive tenders, and Kempower was eventually selected to supply CERN with 200 precision power sources, which are used to supply 60% of the electrical power needed for the Large Hadron Collider.

A huge amount of work was required to prepare the power sources. It called for long working days, new inventions, and, above all, going through a 60-page list of requirements, as CERN had unimaginably stringent demands. The mean time between failures was approximately 17 years. In one year, the current supplied by the power source may deviate from the rated value by 0.007%, while the permitted deviation in one 24-hour period is 0.001%. Over half an hour of even loading, the maximum permitted current deviation was 0.0005%. To put it plainly, the fluctuation in the output flow rate needed to be so small that it could not even be properly measured.

This extremely stringent reliability requirement was due to the fact that a single accelerator start-up takes over 8 hours. If the accelerators were not reliable, CERN would not have time to do anything other than start up the accelerator. The second reason for such strict requirements was that the 27-kilometer (16.8-mile) accelerator, which takes protons that are invisible to the naked eye and accelerates them almost to the speed of light, is located 100 meters (328 feet) below ground.

Technology Manager Petri Korhonen says that when the company learned about CERN's requirements, it began developing a power source by breaking it down into smaller sections. For example, one problem was the heat generated by power sources below the ground. How could it be directed away from the heating components? Fans could not be used, as they reduce reliability. If heat was transferred into a cavern outside the accelerator, it would soon become a sauna. Therefore, the heat needed to be transferred into water, but how could this be done while ensuring that the water does not heat up too much? This is how Kempower proceeded – by solving the problem one step at a time.

During the development phase, CERN's personnel visited Kempower several times, and Kempower personnel also visited CERN. When the prototype was ready, it was delivered to the research center for testing. The power source clearly met all of the precision and quality requirements.

CERN originally intended to use two suppliers, but because Kempower was the only company in the world to meet the requirements for the particle accelerator, CERN ordered all 200 power sources from Lahti. The contract was worth more than EUR 7 million.

In 2006, Kempower won the CERN Golden Hadron Award for designing and manufacturing top-quality power sources.

The technology used for the power source is still used in Kempower's power sources today.

Kempower won the CERN Golden Hadron Award in recognition of its "excellent achievement in designing and manufacturing top-quality power sources for CERN's Large Hadron Collider."
Pictured from left: Valérie Montabonnet, Frédérik Bordry, Anssi Rantasalo, Petri Korhonen, and David Nisbet.

A computer-generated image of the LHC tunnel. © CERN Geneve

AN ELECTRIC FUTURE

THE AIM IS TO MAKE IT EASIER TO CHARGE ELECTRIC VEHICLES THAN TO FILL UP WITH CONVENTIONAL FUELS.

Kempower Oy, which belongs to Kemppi Group, develops charging equipment and systems for material-handling equipment at ports and airports, as well as for public transport, the mining industry, and private vehicles. It also develops products for electric passenger ferries, ships, and boats, which are becoming more widespread.

At first, it is hard to see the connection between welding equipment and chargers for electric vehicles, but upon closer inspection, there are plenty of similarities in the devices and the way they work. The wall socket supplies alternating current, which is converted into direct current. During charging, the direct current is transferred to a battery, while during welding, it becomes visible in the form of an arc.

Chargers and welding equipment have similar power ratings. It makes sense for Kemppi Group to capitalize on its 70 years of leadership in the welding industry by seeking new applications. Whether Kempower is designing a charging solution to be placed curb-side or miles underground in a mine, it can lean on Kemppi's expertise and electronics, which are suitable for challenging conditions and demanding applications.

Welding and charging both revolve around electricity. Welding uses electricity as a tool to create a weld seam. The charging business uses electricity as a consumable commodity where volume is the decisive factor: who can deliver it more cheaply, sufficiently, and reliably?

Kempower's CEO Tomi Ristimäki believes that having one charger for a single car at the end of a parking lot is a rapid transitional phase. In the future, power sources will be centralized, and one source may have several sockets enabling cars to be charged with electricity priced in various ways.

"Kempower's charging power sources are designed to be modular. They can be combined to build precisely the right power source with an appropriate power rating for any site or need."

Modularity provides the flexibility to increase the rating of the power source by adding modules at a later date.

Kempower's charging devices also stand out from the competition in terms of their usability and reliability.

"The market for electric vehicles is booming in certain industries. For example, ventilation is one of the largest operating cost items in a mine. By switching from diesel vehicles to electric ones, the mine no longer has to worry about diesel fuel emissions. This significantly reduces the need for ventilation. It also eliminates the health hazards that emissions cause for employees."

Several cities are investing in clean public transport and dramatically restricting the use of combustion engines in downtown areas. For example, electric vehicles now account for more than 50% of new cars sold in Norway in 2019.

"We are no longer talking about future applications – electric transport has already arrived. And the pace is only accelerating," Ristimäki summarizes.

Kempower aims to make charging easier than filling up with a conventional fuel.

CTO Mikko Veikkolainen (left), CEO Tomi Ristimäki, Director, Projects, Petri Korhonen, and Director, Sales & Marketing Erik Kanerva with the Kempower Mobile DC fast charger T-Series 40 kW.

MR. AND MRS. **HANNU**

A SALESMAN'S WORK IS NEVER DULL.

Long ago in faraway Taiwan, an amusing clash of cultures took place when Welding Instructor Hannu Saarivirta and Sales Director Hannu Jokela arrived at a hotel, feeling exhausted after a long flight. They had an early wake-up scheduled for the following morning, and they were looking forward to a shower, a good dinner, and maybe just one beer to mark the end of a long journey before going to bed.

Kemppi's local representative had reserved the rooms in advance, but a slight cultural misunderstanding had occurred when the reservation was made. In China, the surname is always written before the forename, so the men's names were back-to-front. Saarivirta and Jokela had become Mr. and Mrs. Hannu, a married couple.

If the story had ended there, they would not have had any more issues. The beds in the room could have been pulled apart, and each Hannu would have his own bed.

However, the hotel clerk who had made the reservation had decided, for one reason or another, to surprise the couple with particularly good hotel service. Instead of a normal room, Mr. and Mrs. Hannu had been given the most expensive and luxurious room in the hotel: the bridal suite.

The Hannus were naturally surprised at this change in gender and marital status, but, sadly, there is no record of the look on the receptionist's face when the door opened to reveal not a happy couple of newlyweds, but two burly Finnish men, one with a beard and the other with a mustache.

The hotel was fully booked, so the bridal suite was the only option. All they could do was hand over the key and carry up the suitcases. But that is not the end of it. There was one further surprise awaiting the men: The hotel had sent up a bottle of cold champagne and a basket of fruit as a welcoming gift. Luckily, the large bed could comfortably accommodate two Hannus.


MR AND MRS HANNU?!
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?!
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R
gatenland
2008

KEMPPI'S

1949

Kemppi's first welding power source

1960S

Production of MIG/MAG welding equipment begins

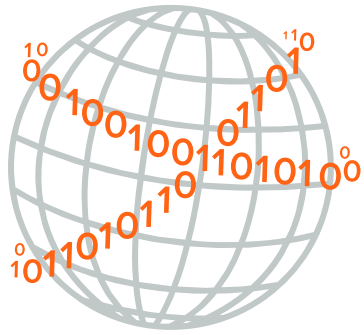
1977

The Hilarc 250 is the world's first welding inverter power source

2006

The MinarcMig™ Adaptive 180 receives the Red Dot Design award

2008



The Kemppi ARC System, a universal IoT solution for controlling welding quality and enhancing productivity

2010

Kemppi DataStore wins the Quality Innovation of the Year award

MOST IMPORTANT

1981

Launch of the Multisystem

1991

Launch of the Master
1500 & 2200
third-generation equipment
based on IGBT technology

1993

Kemppi Pro
Kemppi becomes the first manufacturer in the world to make the leap from analog to digital welding technology.

2012

The Kempact RA product family receives the iF Design Award

2013

Universal standard welding procedure specifications to meet the requirements of the EN 1090 standard for all MIG and MMA welding equipment

2015

The A7 MIG Welder is a solution for robotic welding, compatible with most robot models

INNOVATIONS

1997

The MasterTIG AC/DC, a multi-voltage machine that enables welding with alternating current and direct current using both polarities

2005

Thanks to FastMig's modularity, one system can be used to weld all materials. The Wise software provided the equipment with additional features

2005

WiseRoot
The first in a range of software products developed for arc control

2016

The expanded WeldEye, a universal cloud service for welding production management, is launched for a new technology platform.

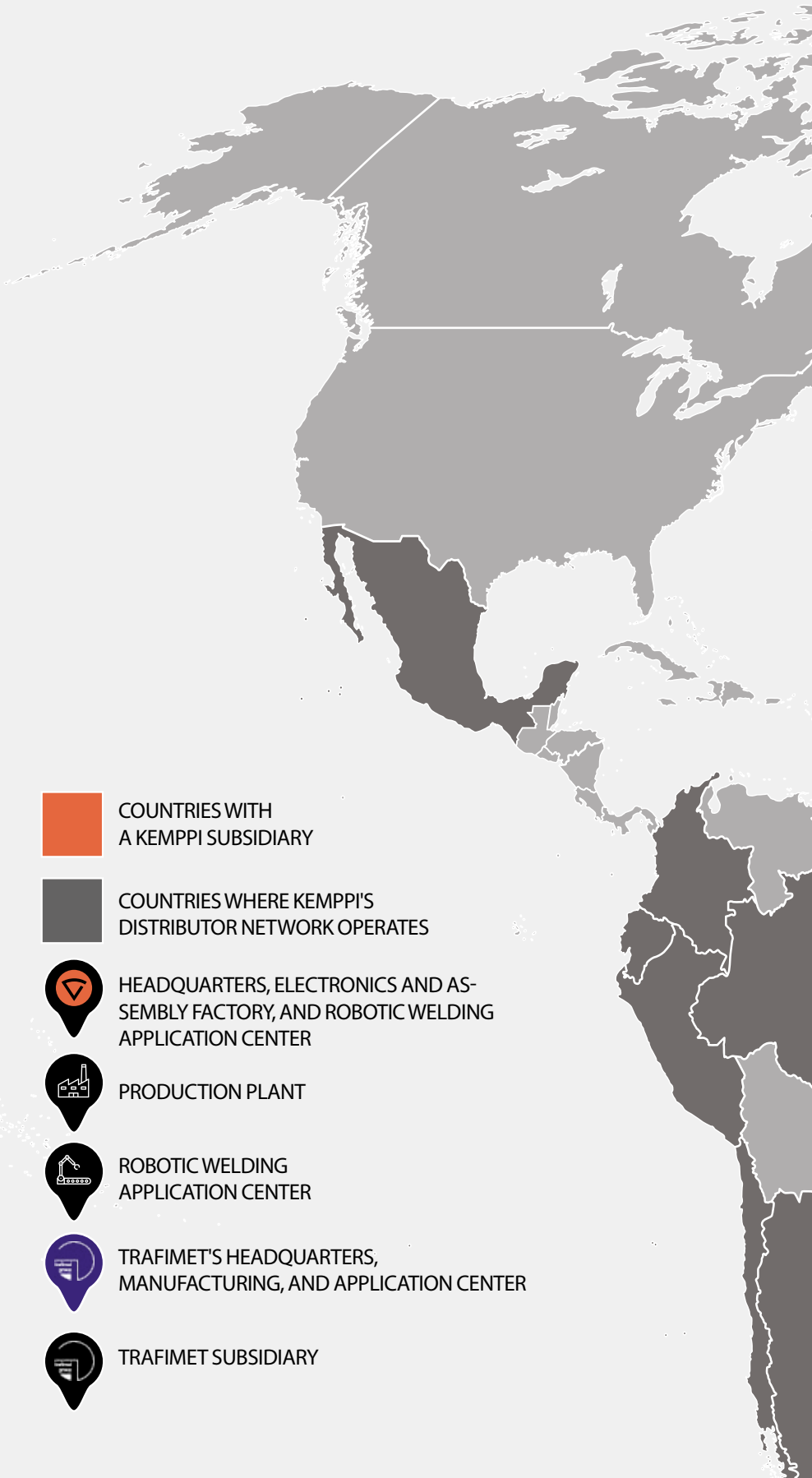
2017

The X8 MIG Welder with built-in IoT compatibility is the first system in the world to offer the digital welding procedure specifications

2019

Gamma GTH3 respirator systems and welding helmets

WORLD OF KEMPPI



COUNTRIES WITH A KEMPPI SUBSIDIARY

COUNTRIES WHERE KEMPPI'S DISTRIBUTOR NETWORK OPERATES

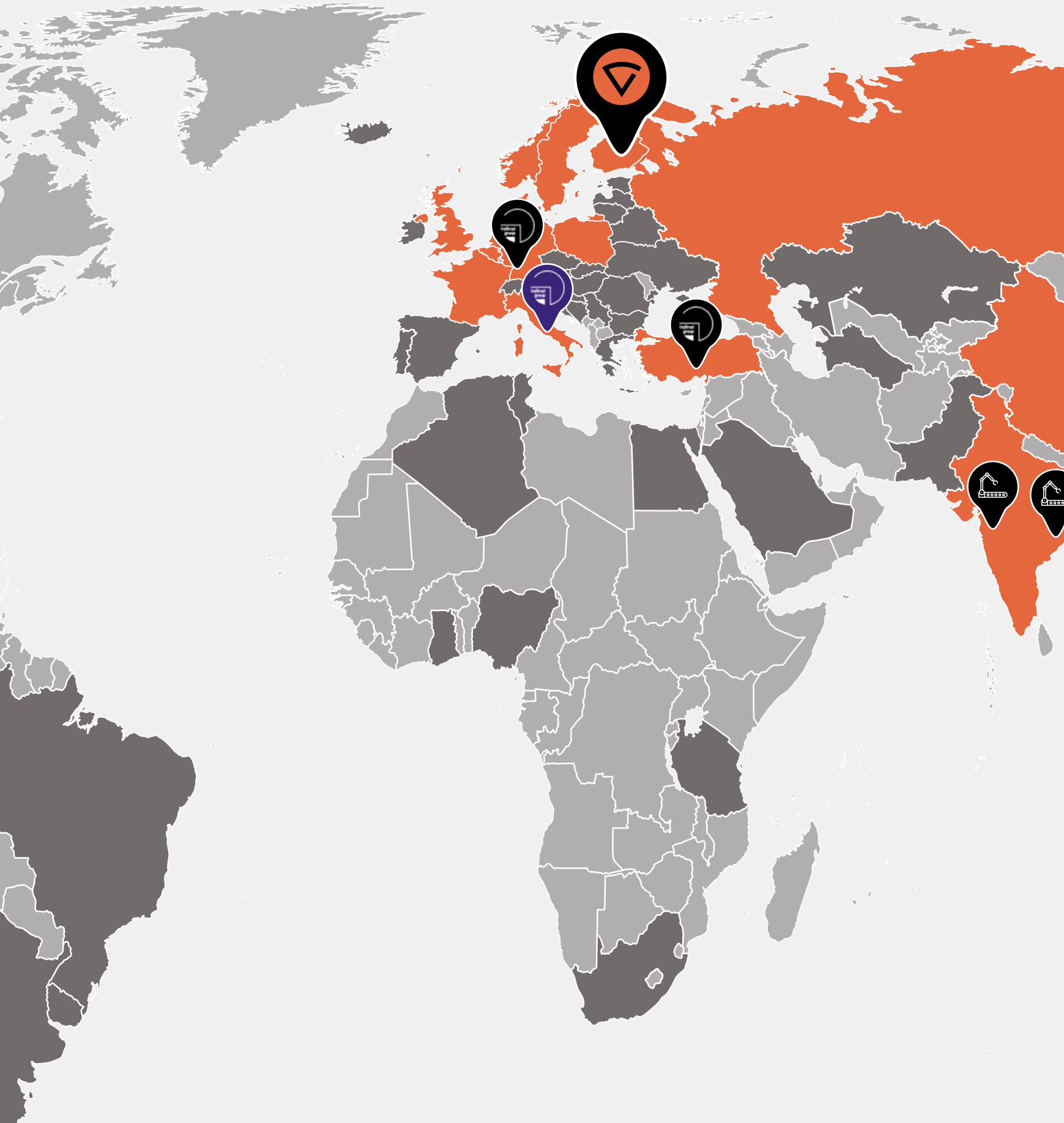
HEADQUARTERS, ELECTRONICS AND ASSEMBLY FACTORY, AND ROBOTIC WELDING APPLICATION CENTER

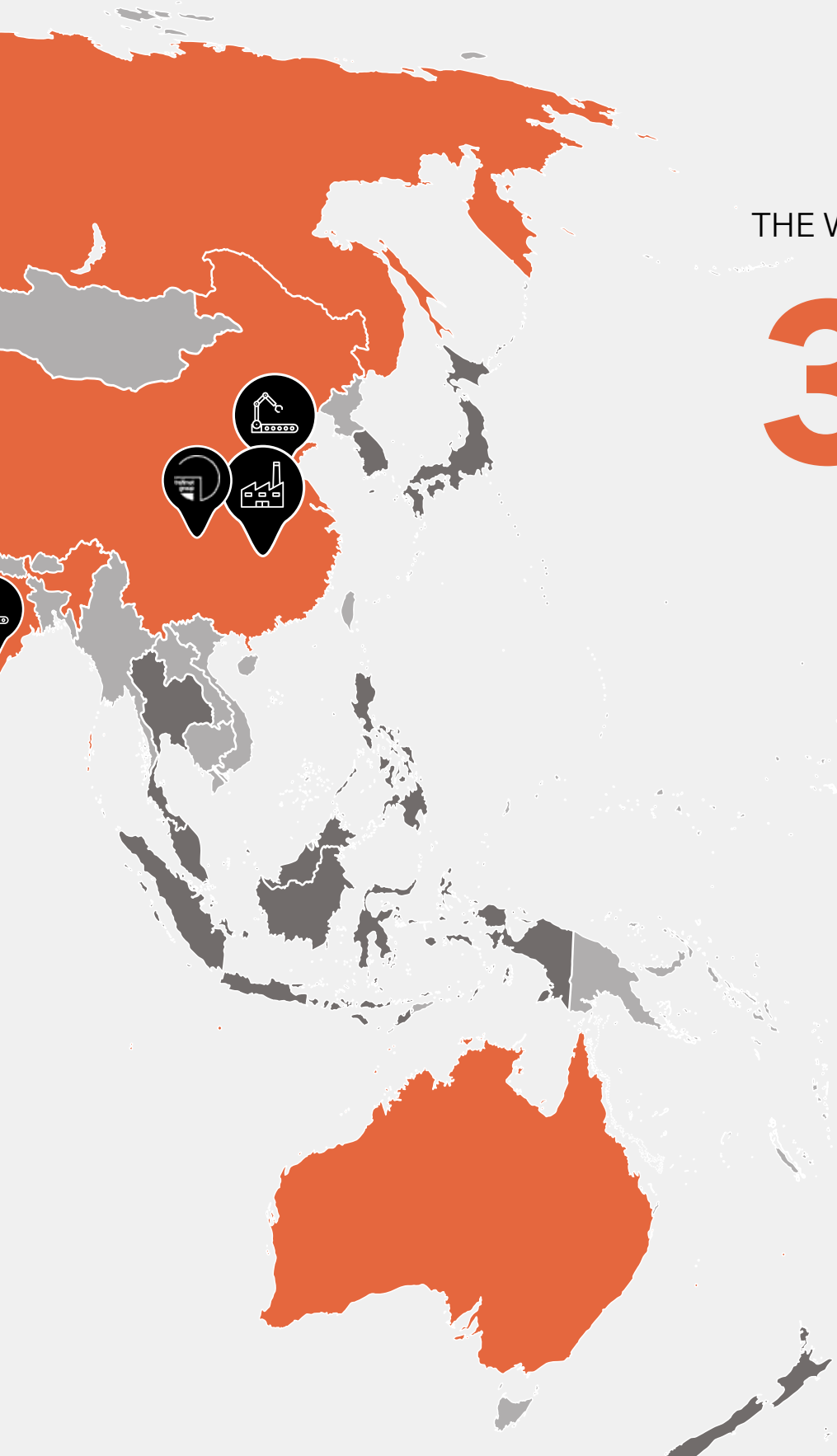
PRODUCTION PLANT

ROBOTIC WELDING APPLICATION CENTER

TRAFIMET'S HEADQUARTERS, MANUFACTURING, AND APPLICATION CENTER

TRAFIMET SUBSIDIARY





17

SUBSIDIARIES AROUND
THE WORLD SERVING 21 COUNTRIES

3800

DISTRIBUTORS AROUND
THE WORLD

MORE THAN

70

COUNTRIES WHERE KEMPPI'S
PARTNER NETWORK IS PRESENT

4

ROBOTIC WELDING
APPLICATION CENTERS

Family

Martti Kemppi married Sylvia Lehtonen, whom he met on his first day as a civilian after completing military service. They met in Lahti in the company of mutual friends. The boy from Karelia wed the girl from Tavastia in the Central Lahti Church on November 18, 1945.

Kemppi's story of growth into one of the world's top-rated companies in the field of welding is a journey of three generations. It is a tale of hard work and unyielding determination, belief in dreams, and the courage to make them a reality. In 70 years, Martti Kemppi's vision has grown into a pioneering company employing more than 800 welding experts in 19 countries.

Each generation has played its own role. The first helped the company to grow and laid a strong foundation for the second generation to expand the Kemppi business abroad. The third generation is currently building Kemppi into a genuinely global business.

Martti Kemppi and the children - Jouko, Eija, and Hannu - carrying on the business in the late 90s.

Jouko Kemppi, Eija Vartiainen, and Hannu Kemppi putting their feet up in the back room at the Schweissen und Schneiden fair following a long day's work in 2017.

At Kemppi's 60th anniversary in Sibelius Hall, from left: Antti Kemppi, Jouko Kemppi, Eija Vartiainen, Kimmo Kemppi, Nina Kemppi, Teresa Kemppi-Vasama, and Petri Vartiainen. Front: Sylvia Kemppi.

Sylvia Kemppi, 90 years old.

Back row, from left: Petri Vartiainen, Marko Vasama, Jouko Kemppi, Anna Maria Kemppi, Hannu Kemppi, Tuomo Vartiainen, and Antti Kemppi.

Middle row: Anne Kemppi, Teresa Kemppi-Vasama, Seija Kemppi, Sylvia Kemppi, Eija Vartiainen, Nina Kemppi, and Solja Kemppi. Front row: Aaro and Aura Vasama, and Sienna and Stella Kemppi.

A SOCIETAL INFLUENCER

MARTTI KEMPPI WAS WIDELY RESPECTED FOR HIS WORK TO RAISE THE PROFILE OF ENTREPRENEURSHIP AND IMPROVE THE CONDITIONS FOR STARTING NEW BUSINESSES.

Throughout his life, Martti Kemppi took on many different roles. Not only was he a father and business leader – he was also a societal influencer and advocate of entrepreneurship. He was a trailblazer in arranging entrepreneurs' associations, and he played a crucial role in improving the preconditions for entrepreneurship in Finland. He chaired the Lahti Region Entrepreneurs' Association for a long period. His partner in the entrepreneurs' association was Voitto Talonen, the imaginative executive manager of the association.

In the 1960s, entrepreneurs were looked down on in Finland. The Left Alliance had solidified its position in society and in municipalities under Left Alliance leadership, such as Lahti. Entrepreneurs were treated with suspicion, and there was a desire to perceive their activities as dishonest. Under Martti Kemppi's leadership, the entrepreneurs' association ran a powerful communications campaign, which led to right-of-center political parties winning a majority of the seats on the City Council in the 1976 election.

Another important goal was to improve the conditions for entrepreneurs and raise the profile of entrepreneurship among decision-makers as well as in the eyes of the general public. Martti Kemppi and Voitto Talonen arranged eye-catching events where people spoke about employment and the economy and the debaters included Finland's leading politicians and captains of industry. That period saw the inception of many events designed to bring entrepreneurs together – events that continue to this day – such as the National Entrepreneurs' Day and the Entrepreneur of the Year award. The entrepreneurship message was taken all over Finland, from Lapland to Helsinki, and a rake – the symbol of economic rejuvenation – was even taken to UN Deputy Secretary-General Helvi Sipilä.

The innovative men approached Finland's national broadcaster with ideas for programs with a positive spin on entrepreneurship. At that time, the national broadcaster had a reputation for favoring left-of-center politics in its programs. The organization was nicknamed "Reporadio" after Eino S. Repo, the CEO at the time.

Martti Kemppi was involved in establishing the Federation of Finnish Enterprises and, once it was established, he served as chairman of the Central Union of Finnish Entrepreneurs (SYKL) for three years. For all of his work, Martti Kemppi became the first person in Finland to be awarded the highest badge of honor for entrepreneurs, the Entrepreneurs' Grand Cross. The President of Finland awarded him the honorary title of 'teollisuusneuvos' in 1972.

Martti Kemppi hosted the President and First Lady, Mauno and Tellervo Koivisto, on a visit to the Okeroinen factory in 1987.

AN IRREPRESSIBLE INNOVATOR

JOUKO KEMPPI BEGAN WORKING AS KEMPPI OY'S CEO IN 1980.

"In the time it takes for an ordinary person to take one step, Jokkeri takes two." "High in tempo and loads of ideas." "Jokke is the right man for the job if you need to sell refrigerators to Eskimos." "Jokkeri will not be told that something cannot be done or does not work." Jouko Kemppi has had numerous articles written about him. They paint a picture of a man of conviction and ideas who does not tolerate hesitation. Decisions need to be made – even bad ones – instead of sitting around in meetings and then discussing things for another two weeks. *"While everyone else is still thinking about everything, I have already made five mistakes."*

Jouko Kemppi sees mistakes as opportunities to learn something new, and that is why they should not be feared. Such as when an advert for a product in Sweden stated a price without taxes. The first to call were some angry competitors, and then the consumer protection authorities closed in. *"Nobody had ever sold products at a discount in the welding industry."*

The error led to an important insight. It is worthwhile having an element of surprise because it elevates the company's reputation. And this reputation grew and grew as the years went by.

Jouko Kemppi's long career at Kemppi began with a summer job when he was just a boy. His first duties included soldering cable clamps onto welding cables. Before he became CEO of Kemppi Oy, his greatest achievement was considered to be the way he conquered the Swedish market. Jouko Kemppi served as CEO for 21 years. His wife, Seija, worked at the company as a secretary in the production department for many years.

Throughout his career, Jouko Kemppi received numerous awards and honorable mentions. One of the most prominent of these was his nomination as businessman of the year in 2015. In addition to Martti Kemppi, he was the face of the company, and he made Kemppi well-known also outside the welding field. Jouko stepped on the gas, Hannu on the brakes if necessary. This meant that the brothers did not always agree on things – in fact, they sometimes made their differences of opinion known very loudly. But they were a good team. *"Nobody can beat us. We can shout and make a noise, and people might think we are not the best of friends, but there is always room for a little noise in this world."*

Jouko served as chairman of Kemppi Oy's Board until 2014. Nowadays, he belongs to the Board of Kemppi Group Oy.

Jouko Kemppi's family includes his wife and two children.

Jouko Kemppi (left), Matti Kalsola, and Matti Kemppi at Uulasuvanto in Teno in 1977.

THE COMPANY **STRATEGIST**

KEMPPI SURVIVED THE RECESSION OF THE 1990S LARGELY THANKS TO HANNU KEMPPI.

Hannu Kemppi has played a vital background role in the corporation, handling the company's financial and legal affairs. He has also been responsible for IT, corporate planning, and mergers and acquisitions.

Hannu received the ideal education for these positions. While he was studying at the Helsinki School of Economics, Martti Kemppi bought the farm in Kalkkinen. Hannu Kemppi handled the payroll and accounting for the farm. This enabled him to put his university theory into practice.

In 1977, Hannu Kemppi began working as CEO of Aaltopalkki, a manufacturer of corrugated web girders and glued laminated timber beams. He changed the company's name to Herrala-Talot and sold it to new owners in 1981. In the 1980s, he traveled the world, establishing Kemppi's network of subsidiaries.

Hannu Kemppi has been an expert in various structural arrangements, which have taken place numerous times in Kemppi's history. His achievements include building the subsidiary network, surviving the recession of the 1990s, and preparing for a successful hand-down to the next generation. The younger generation in the families of Hannu and Jouko received voting power in 2007. The hand-down to the next generation was completed in 2014.

Throughout his long career, Hannu Kemppi has held various positions in the company. He has chaired the Boards of the former parent company of the group, Kemppi Capital Oy, and the current Kemppi Group Oy, served as deputy chairman on Kemppi Oy's Board, and acted as deputy CEO at Kemppi Oy. He has also worked as CEO of Kemppien Teollisuus Oy and Herrala-Talot Oy. Nowadays, Hannu Kemppi belongs to the Board of Kemppi Group Oy.

"Jokke enjoys being with people, and he is ideally suited to marketing. I am more of a researcher. I had insight into economics."

Hannu Kemppi's family includes his wife and two children.

TEAMWORK DEVELOPER

IN THE 1990S, KEMPPI INTRODUCED NEW MANAGEMENT MODELS, AND EIJA VARTIAINEN WAS INVOLVED IN DEVELOPING THEM.

Eija Vartiainen (née Kemppi) joined Kemppi Oy as HR Manager in 1983. Her responsibilities expanded to encompass HR leadership in 1987.

"I set myself the target of modernizing HR management and developing collaboration within and between different departments in line with a process mindset. My father, Martti Kemppi, taught me that entrepreneurship encompasses responsibility, originality, and independent thought. In my view, it was appropriate to support these in order for the company's operations to succeed. I proposed performance reviews and assessments of the internal resources within departments back in the 1980s, but the time was not yet ripe. Instead, collaboration, internal communication, and the development of the staff newspaper led to the creation of forums for dialog between different groups of personnel. Creating a culture of discussion helped to prevent conflict during the recession and supported an atmosphere of trust."

In the 1990s, Kemppi introduced new management, IT, working time, and remuneration models, and it created a team and process organization. As HR Director, Eija experienced the development of the organization, both during the recession and in the dramatic upswing that followed. This work experience has led to her being invited to Aalto University, formerly known as the Helsinki University of Technology, to become a specialist teacher in industrial engineering and to lead development projects. Eija and her family moved to Helsinki in 1996, when she began working on Kemppi's Boards.

"I have found it very special to work on the Board of Kemppi Oy in the 2010s, as I was the only member representing the second generation of the family. I contributed my experience and knowledge of the company's various developmental phases. In addition to my knowledge of Kemppi, I have robust experience in various collaboration projects in Finnish industry and good relations with an international management development network. "

"Working as CEO or on the Board is a different prospect in a family company compared to a listed corporation. As a group psychoanalyst and as an expert specializing in the problems experienced by teams and family companies, it is natural for me to discuss the ways in which a family company culture can impact a company's operations and management. I have internalized the basic questions related to decision-making from my father: Why are we doing something and whom are we doing it for? How should we do it? How much will it cost? Which work should we commission from others and which should we do ourselves? The cornerstones of business are: consistent focus, originality, and independent thought, as well as precise cost control."

Eija Vartiainen's family includes her husband and son. *"In a family company, the understanding and support provided by the spouse are invaluable."*

A STRONG FAMILY COMPANY

The first representational duties undertaken by Antti Kemppi and Teresa Kemppi-Vasama in the company's management were to receive the Family Business of the Year award, which was conferred on Kemppi Group Oy. And that is precisely what Kemppi is, even after 70 years – a family company. All of the owners belong to the family and are involved in decision-making. The second generation is still on the Board of Kemppi Group, the parent company, as is the entire third generation. Antti Kemppi is the chairman of the Board of Kemppi Group, and Teresa Kemppi-Vasama heads the Board of Kemppi Oy. The family company's value base is strong, and the shared objective is the company's success.

"It is good to know that when things get tricky, the whole family is behind you," Antti Kemppi says.

Each generation has its own duties. The first grew the company and laid a strong foundation. The second generation took Kemppi out into the world. The third generation has the positive challenge of building the business up into a global welding company, which is also a trendsetter in the industrial Internet of Things.

The cousins, Antti Kemppi, Teresa Kemppi-Vasama, Nina Kemppi, Kimmo Kemppi, and Petri Vartiainen appreciate the things that have made Kemppi the world's leading manufacturer of welding equipment. These include ambition and a desire to be the best.

"We are never satisfied if everything's just going well. We have aimed to be pioneers and frontrunners. Sometimes this has proven expensive and not always wise, but it has been the prevailing mindset," Kimmo Kemppi says.

However, the secret to success has been good products.

"We have always striven to make top-grade products, and we have not given up on this. We want to retain our position at the forefront of development. The desire to be the first and invent something new is in our DNA," says Teresa Kemppi-Vasama.

"IT IS WONDERFUL TO THINK WE ARE ABLE TO EMPLOY PEOPLE. ENTREPRENEURSHIP CAN DO A LOT OF GOOD FOR SOCIETY."

The culture is strong, and the managers lead by example.

"Kemppi's management philosophy is to lead by example. If we plan on handing the company down to the next generation in a better condition, the only way to do this is to constantly work towards this objective," Kemppi-Vasama adds.

Investing in the company's growth and development also means taking care of the employees and jobs.

"We are responsible for employing more than 800 people around the world. This obliges us to constantly do our best," Antti Kemppi says.

Teresa Kemppi-Vasama agrees: *"It is wonderful to think we are able to employ people. Entrepreneurship can do a lot of good for society."*

Martti Kemppi passed down a strong culture of care – the Kemppi spirit – which includes looking after the customers as well as the staff. This Kemppi spirit is fostered with care. The Group has launched the concepts of human-tech and human-touch.

Human-tech means that Kemppi's machines are easy to use. Human-touch means that Kemppi's personnel around the world are easy to approach and good to work with.

A BOLD **EXAMPLE**

When Teresa Kemppi-Vasama was young, she did not plan on having a career in the family company.

"I didn't feel as if there was a place for me at Kemppi. I wanted to follow other dreams."

Teresa studied social psychology at university and organizational development at the Helsinki University of Technology. She later supplemented her studies by completing an M.B.A.

From 1996 to 2009, Teresa worked as a consultant at Accenture and in management positions at the Finnish Red Cross.

Her father, Jouko Kemppi, asked every now and then whether Teresa would come and work for Kemppi, but she enjoyed working in associations where she saw other organizations and sectors and learned about leadership.

The time was right in 2007, when cousins Teresa and Antti decided to take an active role in the family business.

Teresa Kemppi-Vasama and her family moved from Helsinki to Lahti in 2009, and she began working as Kemppi's development manager. Teresa brought with her the culture of inclusion fostered at the Finnish Red Cross whereby every layer of personnel from around the world is included in planning and brainstorming. She raised the importance of stakeholders and increased participation in the strategy process. At the same time, she learned about the world of welding by conducting customer surveys. When the change of generation was finalized in 2014, Teresa was named chair of Kemppi's Board.

Teresa has taken to promoting Kemppi to the outside world in the same way as her father and grandfather. She has been an active member of the Association for Finnish Work, the awards committee of the Federation of Finnish Enterprises, and the Finnish Federation of Family Businesses. She is the deputy chair of LUT University and a member of the Board of Cargotec Corporation. In her home town, Teresa defends Lake Vesijärvi and serves as deputy chair of the Lahti Industry Association.

AT KEMPPI, TERESA HAS CONTINUED TO REPRESENT THE COMPANY AS HER FATHER AND GRANDFATHER DID. HER SUCCESS ENCOURAGES OTHER WOMEN TO ADVANCE IN MALE-DOMINATED INDUSTRIES.

When she won the prestigious Veuve Clicquot Business Woman Award in 2015, her citation included the following: *"Teresa Kemppi-Vasama has demonstrated courage, tenacity, good interpersonal skills, and a dynamic attitude in operating successfully as a woman in a male-dominated industry. Kemppi-Vasama sets an example that encourages other women to make bold progress."* Teresa Kemppi-Vasama was also among the ten distinguished company leaders and influencers who received the first Finland Chamber of Commerce 100 Years badges of honor.

Teresa Kemppi-Vasama is married. She has two children.


ArcFeed
300
KEMPPARC

PARENT COMPANY'S CHAIRMAN

When you are responsible for 800 people's jobs, you need to make responsible decisions and believe in yourself. Antti Kemppi has been preparing himself to work at the family company since he was a boy. He graduated with a master's degree in economics, majoring in accounting, finance, and tax law, in order to gain a better understanding of key business issues. He has systematically developed his owner expertise.

"Throughout my childhood, we always discussed things related to Kemppi around the breakfast table. When you have lived and breathed the company your whole life, it goes without saying that you will work there."

Antti Kemppi established an investment company with his sister, Nina, at the age of 27.

"My father has always encouraged me to experiment and make brave decisions. His only advice was: 'If you do something, do it properly.'"

And that is how things have always been done. The investment company has invested in listed companies, as well as in several different sectors, such as Europe's largest chain of barbers and the software and fintech industries.

Antti Kemppi also sits on several Boards. Active Board membership helps him to understand new business models and learn things that can also be applied in other business sectors.

"When you see how things are done in different industries, the practices can also be reflected inside Kemppi."

Hannu and Jouko Kemppi's children received voting power in 2007, and the hand-down to them was completed in 2014. In the spring of the same year, the third generation took the reins, and Antti Kemppi became the chairman of Kemppi Group Oy's Board. Kemppi Group Oy is the Group's parent company. The parent company is responsible for the long-term development of shareholder value.

"WHEN YOU SEE HOW THINGS ARE DONE IN DIFFERENT INDUSTRIES, THE PRACTICES CAN ALSO BE REFLECTED INSIDE KEMPPI."

Kemppi Group Oy has two subsidiaries – Kemppi Oy, which is in the welding business, and Kempower Oy, which is in the charging business.

"It has been great to see how the previous generation has grown the company into what it is today. Of course, that imparts responsibility, but it also makes me want to leave my mark on history and do something better than previous generations."

Antti is also the chairman of the Board of Kempower Oy and a member of the Board of Kemppi Oy.

Antti Kemppi is married. He has two children.

THE LONE **WOLF**

Kimmo Kemppi has been an entrepreneur from an early age. He set up his first company at the age of 17, but he gained his first taste of entrepreneurship long before then. In his youth, Kimmo toured the horse-racing courses of Finland. At that time, going to the races was mostly about collecting information. It required him to keep track of the races, know the equestrian world, and do thorough groundwork – but even that was not enough. He needed to be able to analyze the information he had gathered and bet on the winner.

"For some reason, I did well, and this was probably one of the reasons I became interested in entrepreneurship," Kimmo recalls. He invested his winnings in stocks and apartments. They were bought, renovated, sold, and put up for rent. In its best period, Kimmoke Oy had around 20 rental apartments in Lahti.

In 1999, Kimmo Kemppi bought Kemppitalli Oy together with Martti Ala-Seppälä. It was a big investment for a young boy.

"I took out a loan for 14 million Finnish marks at a time when interest rates were high. I was working around the clock, but my belief in myself and what I was doing was unshakeable."

And as everything kept going well, it fed his passion and business. Go-Parts Oy, which was established in 2006, is Finland's leading importer and distributor of after-market products for vehicles.

The markets changed in the horse business, and Kimmo Kemppi and his family moved to the United States in 2014 to expand the horse-breeding business of Kemppi Stables Inc., a subsidiary of Kemppitalli.

Kimmo is not involved in Kemppi Oy's day-to-day operations, but he is closely involved in the work of Kemppi Group Oy's Board. He also represents Kemppi at events around the world.

"IT IS GREAT FOR US TO BE ABLE TO CARRY ON THE WORK THAT OUR GRANDFATHER STARTED."

"I want to see for myself what is happening in the markets. This helps me to form an opinion on what Kemppi and its competitors are doing. The 70-year-old family company is highly valuable. It is great for us to be able to carry on the work that our grandfather started."

Kimmo Kemppi is the deputy chairman of Kemppi Group's Board. He studied international business at the Lahti University of Applied Sciences.

Kimmo's family includes his wife and two children.

AN OPPORTUNITY TO MAKE AN IMPACT

"I'VE BEEN INVOLVED IN THE FAMILY BUSINESS FROM AN EARLY AGE, SO IT IS HARD NOT TO BE INTERESTED IN WORKING FOR THE COMPANY."

Family entrepreneurship is a value that carries obligations. Particularly at Kemppi, where the family, work, and entrepreneurship are intertwined across the generations.

"I've been involved in the family business from an early age, done summer jobs there, and heard talk of the company around the dinner table, so it is hard not to be interested in working for the family company," Nina Kemppi says.

She studied cosmetology after finishing high school, but working for the family company was in her genes. She swapped beauty for business, and in 2007, Nina Kemppi graduated with a vocational degree in financial management.

"I wanted to gain a better understanding of the family business and take a more active role in the company."

Since graduating, Nina has worked in various positions in Kemppi's finance department and HR for more than ten years.

"Kemppi has a good reputation as an employer. In HR, I am able to help ensure that Kemppi remains a company where every job is meaningful. I want Kemppi to be a community where everyone feels they belong."

Nina Kemppi has been involved in developing Kemppi's internal communications system, and she has completed several training courses in the field of communications.

It is possible to engage in the company's operations and development in many ways. For Nina, this means participating in the work of the Board in addition to her own work. She belongs to the Board of Kemppi's parent company, Kemppi Group Oy.

"Active and responsible ownership feels like a natural way to make an impact and drive Kemppi forward."

LISTEN AND **LEARN**

"GRANDPA HIGHLIGHTED THE IMPORTANCE OF LISTENING AND LOOKING AT THINGS FROM VARIOUS PERSPECTIVES."

Petri Vartiainen recalls his grandfather, Martti Kemppi, attending his confirmation celebration in the fall of 2002. It was the last time Martti got out of the hospital before he passed away at the beginning of November.

"I remember grandpa as a strong-minded but affectionate person." Petri remembers something Martti said to him: *"Choose your friends carefully."*

"When I was young, I took it to mean that it is not a good idea to get involved in things without giving them careful consideration. Over time, grandpa's advice has taken on a new meaning: choose friends who are wiser than you," Petri says.

Petri Vartiainen began working on the Board of Kemppi Group in 2009.

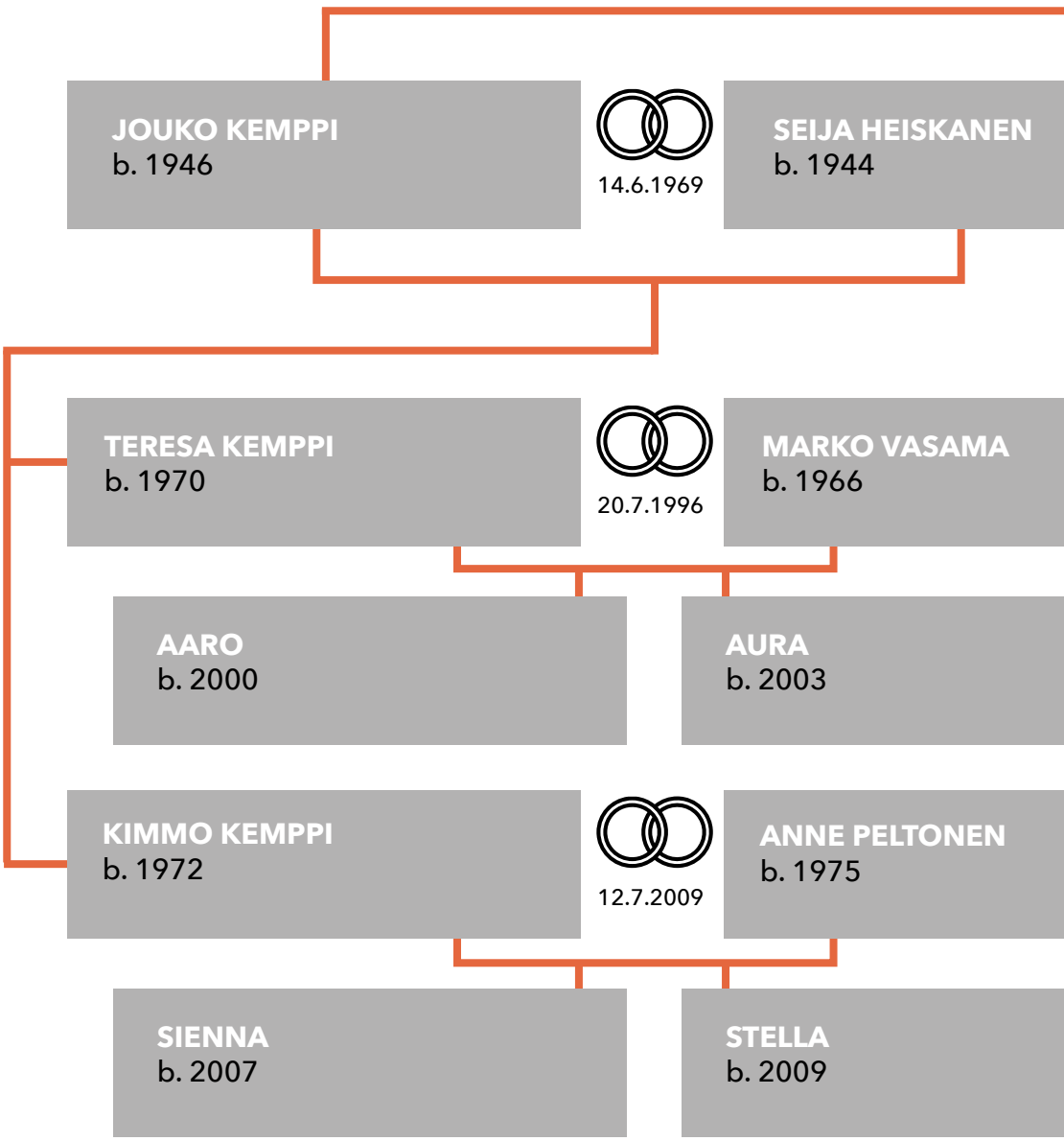
"My first year as a Board member went by in a rush of nerves. Everything was so new to me, and I was only 22."

Now, ten years on, Vartiainen is able to summarize his experiences, and he says that the position of company owner is a challenging one. Cooperation between the owners is particularly important.

"Grandpa highlighted the importance of listening and looking at things from various perspectives. I had tried to make this my motto for my work on the Board. For me, the opportunity to hear the thoughts of Kemppi's experienced experts is very valuable," he says.

Petri is married to Efrosyne Vartiainen.

THE KEMPPI FAMILY TREE



MARTTI MATINPOIKA KEMPPI
13.9.1919–3.11.2002

18.11.1945

HILMA SYLVIA JUHONTYTÄR LEHTINEN
18.4.1921–12.2.2018

HANNU KEMPPI
b. 1949

23.3.1974

ANNA MARIA HAIMELIN
b. 1950

ANTTI KEMPPI
b. 1978

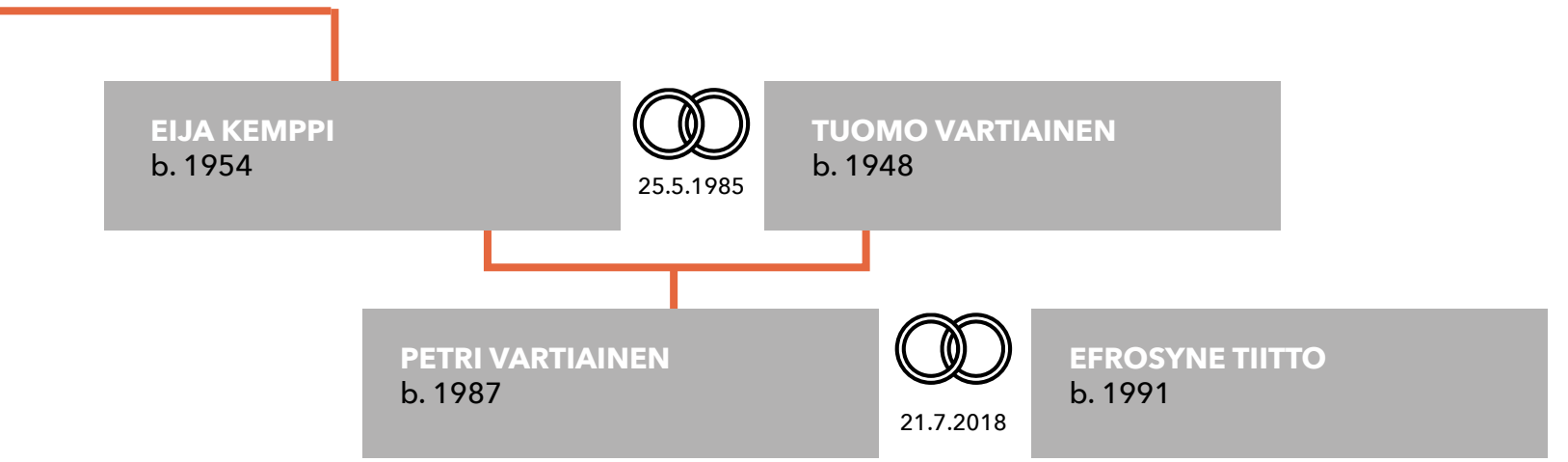
6.6.2009

SOLJA HÄMÄLÄINEN
b. 1984

MILA
b. 2012

MARTTI
b. 2015

NINA KEMPPI
b. 1979


EIJA KEMPPI
b. 1954
25.5.1985
TUOMO VARTIAINEN
b. 1948
PETRI VARTIAINEN
b. 1987
21.7.2018
EFROSYNE TIITTO
b. 1991

70-YEAR JUBILEE

Kemppi's 70 years in business were celebrated in true Kemppi fashion – with sports and a strong team spirit. On May 23, 2019 – the day of the celebration – the Kemppi relay race was held at the factory in Okeroinen, Finland. The race pitched competitors from different countries against each other. The official celebration was held at Sibelius Hall the following day. Almost every Kemppi employee from around the world was in attendance. The surprise band was Kemppi's own orchestra.

Liitos is a commissioned artwork by master blacksmith Kirsti Vahtera, who uses Kemppi equipment to make her art. "The design language of the piece was inspired by the diversity of welding joints and their significance for industry and art and as a working method on various renovation and repair sites. The basic structure is massive. It represents the bedrock – the personnel who enable growth and development in the company while keeping production going."


KEMPPI
ANNIVERSARY

Rashmi Mohapatra brought a gift from Kemppi India to celebrate Kemppi Oy's 70 years in business – elephants sculpted from black mountain rock from the Walajabad in the Kancheepuram district of Tamil Nadu. The elephants represent Indian cultural heritage and Kemppi's values – courage, integrity, and success. The sculptures were made by six professional archaeologists from the town of Mahabalipuram over a period of four months.

Mikko Väisänen, Jouko Kemppi, and Hannu Kemppi admiring a characterful gift from a Russian dealer. On the left: Evgeniya Dmitrieva, who brought the gift. The gift is a piggy bank shaped like a welding machine.

Setting out on their leg of the relay: Jagennathan Sowmyan, Oli Carter, Thomas Heitmann, Joni Paajanen, Mogens Jantzen, Dmitriy Sabrekov, and Sienna Kemppi.

The Russian team: Roman Konovalov, Julia Ermakova, Dmitriy Sabrekov, Yekaterina Lukashenkova, and Julia Kuzmina.

Elina Suomalainen, who was responsible for arranging the 70-year celebration, setting the Kemppi relay competitors on their way.

The spectators followed the race eagerly.

Henri Stach after running his leg of the race.

Product Manager John Frost carries the baton over the line in the UK's colors as Max Bleijswijk, Director of Kemppi Benelux, immortalizes the moment.

Harri Kivelä (center) leading a warm-up session and telling the competitors about the route.

A group photo of the relay racers.

The evening celebration at Sibelius Hall was hosted by Martti Vannas and Ella Kanninen.

Kemppi Benelux personnel enjoying the atmosphere. From left: Max Bleijswijk, Wim Geurts, Christophe van De Keere, Johan van Lenten, Perry Angna, Malinda Kanters, and Robert van der Graaf.

The social media wall was in heavy use. Krista Kihlman and Sonja Airikka posing for a selfie.

David Coleman and David Green from Australia.

Cheers! Päivi Rahkonen, Sanna Otava, Miia Ylikorpi, Reetta Verho, Riikka Savela, Kati Heikkonen, Krista Kihlman, and Sonja Airikka.

Teresa Kemppi-Vasama and Antti Kemppi welcomed the guests.

The flags of the various Kemppi nationalities were flying in the hall, including the Chinese flag.

Martti Vannas toured the hall, entertaining the guests. The Indian visitors enjoyed the card tricks.

From left: Tuula Tinnilä, Anu Maaniittu, Saara Jäntti, and Pirjo Tiainen

Recipients of badges of honor among Kemppi's personnel. Left: Ville Vuori, Anne Aaltonen, and Teresa Kemppi-Vasama.

Twirling on the dance floor in the foreground: Marta Babikowska and Tomasz Jabłoński.

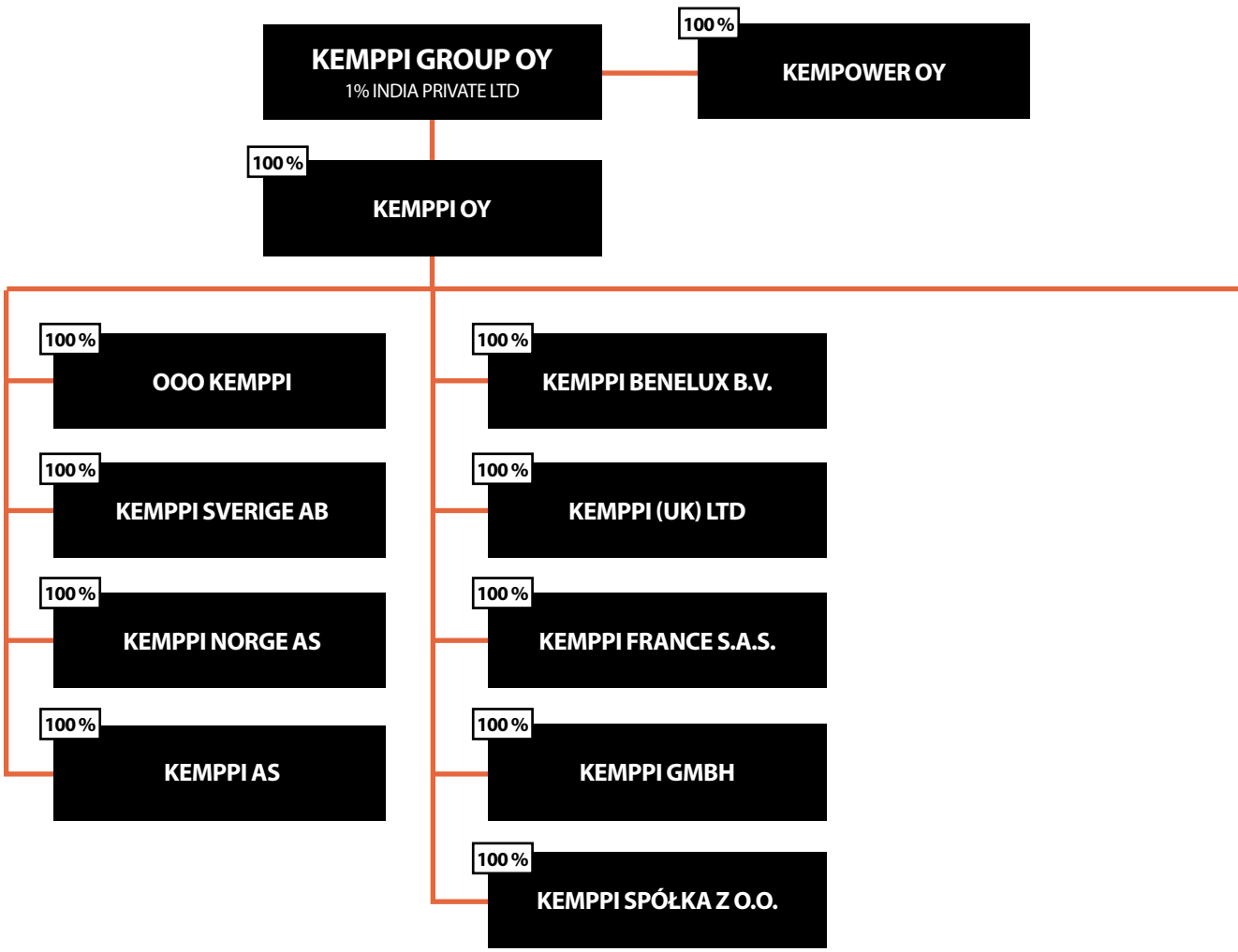
Fireworks light up the sky over Lake Vesijärvi.

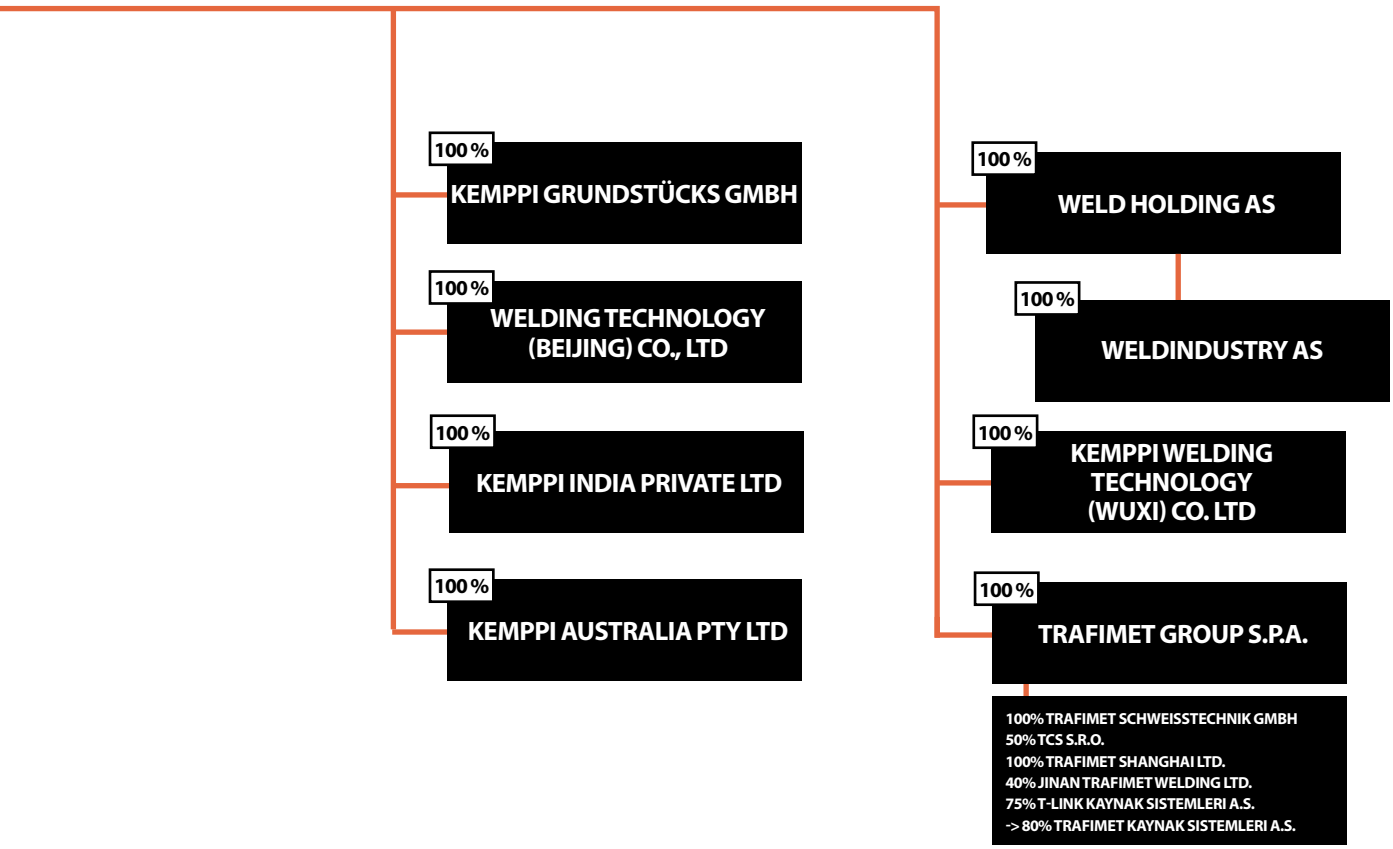
The evening culminated in a performance by Kemppi's own band; from left:

Juhana Venemies, Joni Paajanen, Petri Koukkari, Paul McVicar, and Sami Väisänen. Eetu Kivioja and Aleksi Nyholm are absent from the photo.


BORN TO ROCK

KEMPPI GROUP OY
CORPORATE STRUCTURE




100 %
KEMPPI GRUNDSTÜCKS GMBH
100 %
WELDING TECHNOLOGY (BEIJING) CO., LTD
100 %
KEMPPI INDIA PRIVATE LTD
100 %
KEMPPI AUSTRALIA PTY LTD
100 %
WELD HOLDING AS
100 %
WELDINDUSTRY AS
100 %
KEMPPI WELDING TECHNOLOGY (WUXI) CO. LTD
100 %
TRAFIMET GROUP S.P.A.
100% TRAFIMET SCHWEISSTECHNIK GMBH
50% TCS S.R.O.
100% TRAFIMET SHANGHAI LTD.
40% JINAN TRAFIMET WELDING LTD.
75% T-LINK KAYNAK SISTEMLERI A.S.
-> 80% TRAFIMET KAYNAK SISTEMLERI A.S.

KEMPPI GROUP OY

CHAIRS OF THE BOARD OF DIRECTORS

Eija Vartiainen
2006–2007
Hannu Kemppi
2007–2010
Teresa Kemppi-Vasama
2010–2011
Hannu Kemppi
2011–2012
Olli Ryynänen
2012–2014
Antti Kemppi
2014–

CEOs

Antti Kemppi
2006–2011

BOARD OF DIRECTORS 2019

Antti Kemppi,
Chair of the Board of Directors
Hannu Kemppi,
Member
Teresa Kemppi-Vasama
Member
Jouko Kemppi
Member
Eija Vartiainen
Member
Kimmo Kemppi
Deputy Chair
Petri Vartiainen
Member
Nina Kemppi
Member
Olli Ryynänen
Member

Kemppi Oy's Board of Directors at Turku shipyard in fall 2018.

KEMPPI OY

CHAIRS OF THE BOARD OF DIRECTORS

Martti Kemppi
1970–2002
Jouko Kemppi
2002–2014
Teresa Kemppi-Vasama
2014–

CEOs

Martti Kemppi
1950–1969
Veikko Suurmunne
1970–1976
Sakari Raevaara
1977–1979
Jouko Kemppi
1980–2001
Anssi Rantasalo
2002–2017
Teresa Kemppi-Vasama
2017–2017
Ville Vuori
2019–

BOARD OF DIRECTORS 2019

Teresa Kemppi-Vasama
Chair of the Board of Directors
Matti Hyytiäinen
Deputy Chair
Antti Kemppi
Member
Tomas Hedenborg
Member
Juho Malmberg
Member
Heikki Westerlund
Member

KEMPOWER OY

CHAIRS OF THE BOARD OF DIRECTORS

Hannu Kemppi
1997–2000
Jouko Kemppi
2000–2001
Hannu Kemppi
2001–2004
Antti Kemppi
2018–

CEOs

Martti Kanervisto
1997–2000
Lauri Kärävä
2000–2004
Tomi Ristimäki
2019

BOARD OF DIRECTORS 2019

Antti Kemppi
Chair of the Board of Directors
Teresa Kemppi-Vasama
Ville Vuori
Katri Sahlman

KEMPPI SUBSIDIARY MANAGERS

AUSTRALIA
2000–2003 Kent Eimbrodt
2003–2005 Kari Kemppi
2005–2011 Chris Oke
2011–present David Green

CHINA
2007–2010 Roger Liu
2010–present Frank Geng

RUSSIA
2006–2009 Lauri Leinonen
2009–present Evgeniya Dmitrieva

UK
1980–1984 Jukka Pitkänen
1984–1997 John Walters
1998–2015 Mike Pixley
2016–2018 John Frost
2018–present Hannu Jokela

NORWAY
1981–1987 Helge Aabye
1987–1988 Jostein Skree
1988–1990 Henning Lund
1990–1999 Knut Hovden
2000–2001 Bertil Johansson
2001–2003 Göran Mönefors
2004–present Erik Fusdahl

SWEDEN
1971–1974 Bertil Lager
1974–1977 Rolf Arnebjer
1977–1979 Jouko Kemppi
1979–1984 Curt Germundsson
1984–1987 Jan Eriksson
1987–1988 Jouko Kemppi
1988–1990 Hans Baatz
1990–1994 Jouko Kemppi
1994–2001 Bertil Johansson
2001–2015 Göran Mönefors
2015–present Erik Fusdahl

FRANCE
1984–1987 Jean Pierre Gregoire
1992–1994 Jean Springael
1987–1992 Philippe Visage
1994–1997 Anssi Rantasalo
1997–2002 Tapani Liuksela
2003–present Svetoslav "Slavi" Ditchev

POLAND
2001–2014 Jacek Rutkowski
2014–2015 Wojciech Leszczorz
2015–present Jakub Zygmunt

KEMPPI AS (DENMARK)
1988–2009 Steen Bergstrom
2009–present Erik Fusdahl

KEMPPI INDIA PVT LTD
2010–2014 Arvind Vasu
2014–2015 Aki Jormanainen (General Manager)
2015–present Rashmiranjan (Rashmi) Mohapatra

KEMPPI BENELUX B.V
1994–1999 Gerrit Eilander
2000–2017 Joop van Elen
2017–present Max Bleijswijk

WELDINDUSTRY AS
2001–2012 Tore Haukanes
2012–2014 Jarle Mortensen
2014– Erik Fusdahl

TRAFIMET GROUP S.P.A.
2019–present Marco Servadio

KEMPPI'S PRODUCTS
DECADE BY DECADE

1940s and 1950s
Welding transformer 1 (1946)
Welding transformer 2 (1949)
Welding transformer 3 (1951)
LTA 185 (1955)
LTA 250

1960s
1. Transductor (1960)
LH 250 (1960)
LM 100 (1963)
LARC electronic power rectifier (1965)
LH 200 (1966)
RATAK 200 I LIS 2 (1966)
LH 200R (1966)
LATYR 400 (1968)
LHT 250 I 200 (1969)
EKA 155
LIWATA 350 | 250
LIWATO 350 I 250
LMS 300
POLARC
Kempomig RA 320 | LISA 7
MIGOMAT
UFO 140
Kempomat 230

1970s
LIW 500 (1970)
TYLARC 300 (1975)
Mineka 130 (1978)
HILARC 250 (1978)
TRAN 200 (1978)
HILARC-450
UFO
TOP
RA/LISA
KEMPOMAT
MARC
LHF
BEOKMAT
LTDP
KP
KAP
MULTARCPOLARC

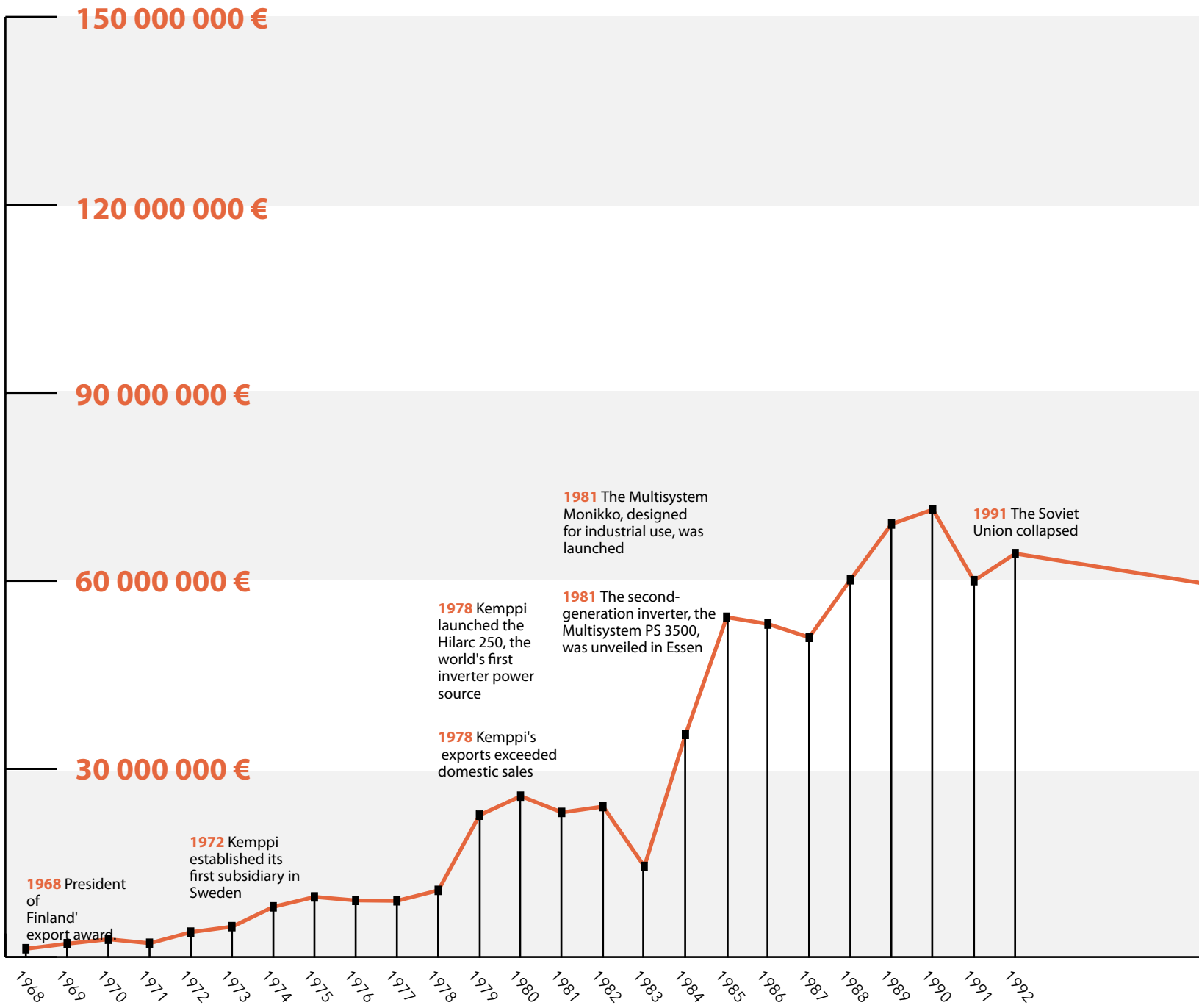
1980s
MIGOMAG 153 (1981)
Multisystem PS 3500 (1981)
Super KEMPAK (1984)
Multisystem Monikko AC/DC PSS3500 | WU10 | TU50
(1989 | 1985 | 1989)
Super KEMPOMAT (1985)
C 120P (1985)
Minisystem Trio MP1500 I MM05 I MTC/ MTLG
(1987-89)
Minisystem MP 2400 (1987)
Top 110
SUPER KEMPAK/KEMPAKTIG 150
KEMPAK/KEMPAKTIG 200
KEMPOTIG 150 DC
TRIGGER 1000
PSE, PSI, HM, IPM

1990s
Kempomat 180 (1991)
Master 1500 & 2200 (1991)
Trigger 1000 (1991)
Mastertig 1500 (1992)
Mastertig 2200 (1992)
Kempotig AC/DC 250 (1992)
Mastertig 2800 & 3500 (1993)
Kemppi PRO (1993)
Kempomat 150 (1996)
Master 5000 (1996)
MasterTIG AC/DC 2500 (1997)
KEMPOMIG 3200, 4000 (1997)
Special Kempomat 2000 (1999)
Special Master 2000 (1999)
PROMIG 520R + 120R (ROBO)
(1999)

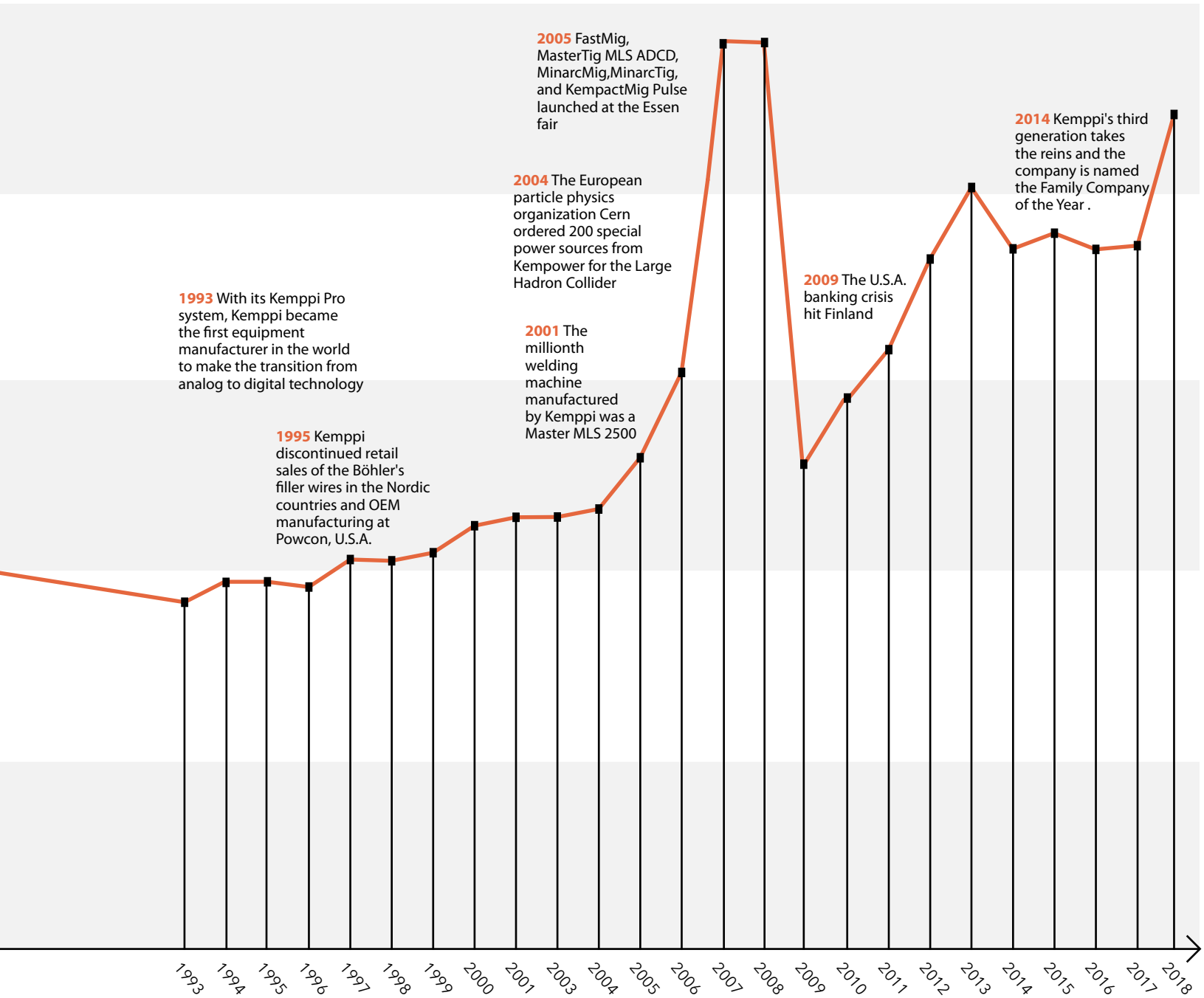
2000s
MasterTig ACDC 3500 W (2000)
Master MMA, TIG MLS DC (2001)
PRO EVO (2001)
Minarc 140 (2001)
Minarc 110 (2002)
PROMIG 520 MXE (2003)
Minarc 150 (2004)
WELDFORCE (2004)
PROMIG 540R, FEED ROBO (2004)
MinarcMig 150,180 (Red Dot) (2005)
KEMPACT 2520,2530, PULSE, MVU, (2005)
FastMig Basic, Synergic (2005)
MasterTig MLS 2300 ACDC (2005)
MasterTig MLS 3003 ACDC (2006)
KempArc (2006)
MinarcTig 250, Minarc 220 (2008)
Kemppi ARC System (2008)
ArcInfo (2008)
FitWeld (2009)
FastMig PULSE, (2009)
WiseFusion, WisePenetration, WiseRoot
XiM 350,500 (2009)

2010s
KempArc Pulse (2010)
Hiarc M 400, 500 (2011)
Minarc EVO (MMA,MIG,TIG) (2011)
(MinarcMig Evo 200) (2011)
Kempact RA (2012)
ARC Quality (2012)
Master LT250 (2013)
FastMig Pipe, Regular, Intelligent (2013)
MagTrack (2013?)
KAS ARC Q (2014)
Standard WPS (2014)
Master S, HiArc S (2014)
FastMig M, MVU, X (2014)
FitWeld Evo (2015)
AMC Arc Mobile Control (2015)
ARC VALIDATOR (2015)
A7 MIG Welder, (2015)
A5 MIG Orbital System, A3 MIG Rail System,
A5 MIG Rail System (2015)
A5 TIG Orbital System, A7 TIG Orbital System (2015)
WeldEye (2016)
X8 MIG Welder (2017)
X3 MIG Welder (2018)
A3 MIG Welder (2018)
Gamma welding helmets and respirator systems
The new MasterTig product range
The Flexlite TX TIG welding torch range

TURNOVER 1968–2018



* Original net sales figures, not discounted to current value



ANNIVERSARY

“You must have the courage to experiment and test the limits.”

-Martti Kemppi

KEMPPI