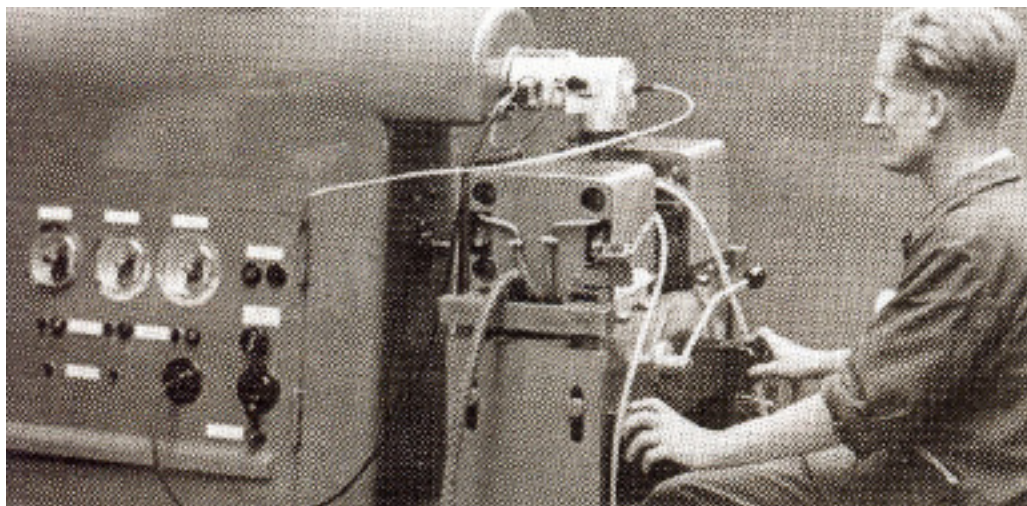


80th Kautex Anniversary July 2015



Drawing experience from 80 years

Listening to customers, developing solutions and making the technically impossible possible – that is how you could briefly describe Kautex's success story. On our 80th anniversary, we are looking back once more at the milestones in the company's history in this K-News, whilst also presenting a range of technical innovations.



Retrofit also now in Shunde

Since 2014, modernization has been underway of used Kautex machines directly in the Shunde plant. The company presented one of the first retrofit machines from China at this year's Chinaplas in Guangzhou. The machine, a type KB25, which is used to manufacture airflow tubes, was afterwards moved to the Application Development Center (ADC) of EMS CHEMIE (Suzhou) Ltd., which will be opened in November. And the Kautex Shunde plant is celebrating its 20th anniversary this year. Read more about this and the Shunde retrofit program on pages 2 and 3.

Kautex's history goes hand in hand with the history of extrusion blow molding technology. In both cases, Reinold Hagen's and his brothers' courage, desire to experiment and passion for technology made a great contribution. What was started by our founders 80 years ago is still being carried out by Kautex Maschinenbau to this day. In so doing, the company has focused on what it does best: extrusion blow molding - no more and no less. Kautex Maschinenbau would not have become one of the most successful companies in its sector if it had not been focused and had not pursued the needs of its customers with passion and drive.

The best of both worlds

As managing partner, Andreas Lichtenauer knows that the eventful history had a considerable impact on the company's success: "In the 80 years of being in business, Kautex was at times independent and owner managed and at times part of a global organization. We don't just know both worlds, we have, so to speak, embedded the best of both worlds in the DNA of our company." Modern management practices were implemented in the company over time and global strategies and processes developed and introduced. These abilities, coupled with the flexibility, speed and independence of an owner managed company are important success factors in the market.

Always on the move

Kautex Maschinenbau is above all well known for constantly introducing ground breaking technical innovations. In the next 12 months, the company will present a wide range of new technical innovations. This includes an all-electrical canister machine, a compact machine design that is perfect for the production of containers and a new energy efficient drive module for various models of machine. You can read more about current Kautex projects on pages 6 and 7.

Andreas Lichtenauer is convinced that Kautex Maschinenbau is well positioned for a bright future: "Our aim is to make extrusion blow molding even more flexible and efficient so that even more products can be manufactured with this process in the future."

Page 2

Kautex 20 years in Shunde
Laying the foundation stone for a factory in China



Editorial
Review and outlook



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First CoEx-machine for fuel tanks
Still in use today



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Our history
From the beginning to today



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News from the Kautex Technikum
These trends are moving markets

Kautex chronicle
Follow our history through eight decades



Page 7

Competence Team "Extruder"
Continuous improvement of extruder technique

Machine projects 2014/15
An overview

Page 8

Trade fair marathon for Kautex
A total of 16 trade fairs worldwide and new emphasis on gas applications



Kautex 20 years in Shunde

In addition to the 80th year anniversary, Kautex has yet another reason to celebrate. 20 years ago, the foundation stone was laid for the Kautex plant in Shunde in the southern Chinese area of Guangdong.

In order to facilitate entry to the Asian market, Krupp Kautex Maschinenbau GmbH, together with the Chen Hsong and the Shunde Sunny Group in China, formed the company Krupp Chen 20 years ago. What began as a German-Chinese joint venture in the southern Chinese region of Guangdong, has over nine years developed into a strong business unit, which produces KCC machines on site and delivers worldwide. Since the exit of the Chinese partners in 2004, the company trades under the name Shunde Kautex. It has been a one hundred percent subsidiary of Kautex since 2005.



Signing of the joint venture contract 1995 (from left: Erich Wendling (Krupp Kautex), Mr. Chen (Chen Hsong), Mr. Fu (Sunny Group))

Modernization and expansion of production

Under the guidance of the local management team of Du Guoliang, Andreas Krause and Mark Lüddecke, the company continued to develop Shunde Kautex. With modern production and an established group of reliable suppliers, good foundations were laid over the past years to reinforce the fact that Kautex machines are renowned worldwide, including the products from the plant in Shunde. For this purpose, an international "KCC quality team" was formed in 2010.

In the meantime, the number of satisfied customers in Asia as well as in the western world was growing year to year so that at the start of



The KCC1 was produced in Shunde from 1996

2013, Shunde Kautex opened a new larger factory, which was modeled on the production building in Bonn. The higher ceiling in the assembly hall makes it possible to build larger multi-layer or multi-cavity machines and for trucks to drive into the assembly area for loading. Thanks to the greater production capacity, customers benefit from shorter lead times with proven quality.

Retrofit program also now in China

Recently, Shunde Kautex has been also offering its customers the opportunity to modernize blow molding machines according to the proven retrofit concept. "Kautex-Maschinenbau has a very good reputation in the second-hand machinery market," stresses Managing Partner, Andreas Lichtenauer. "In order to guarantee aspects such as productivity, convenience, flexibility and safety in the long run, we offer our customers the opportunity to upgrade Kautex equipment to the current standards in a cost effective way through our retrofit program." In addition to upgrading controls, head, extruder or closing device and the integration of new production methods, production lines can also be subsequently automated or updated in order to obtain CE marking.

Contact: mark.lueddecke@kautex-group.com



To everyone at Kautex

It takes imagination, a focus on quality, hard work and team spirit to come through difficult times and remain competitive on the global market. Here in North Rhine-Westphalia, an impressive example of a family-owned firm with these particular strengths is Kautex Maschinenbau GmbH. You should be very proud.

Many congratulations on your anniversary, and I wish you all the best for the next 80 years.

Hannelore Kraft

Prime Minister of the federal state of North-Rhine-Westphalia

Editorial



Dear business associates and friends,

I don't have to think too long when I am asked what I particularly love about my job. Working for a company such as Kautex Maschinenbau is anything but boring. I often don't know what surprises the day may hold. There's always something going on: the sectors in which we operate, the regional markets, the customer needs. Trends that apply today are sometimes history tomorrow. Additionally, there may be political crises and natural catastrophes somewhere in the world that can change everything from one day to the next. Business then comes second.

The fact is that working for Kautex has always been exciting, even in the past. Our eventful corporate history demonstrates this. In the current K-News, we invite you to explore our 80 year history and the development of extrusion blow molding. We are proud of our past and love taking a look back. Kautex Maschinenbau would not be the company it is today, one that understands and values its customers, without the key events that shaped our history, successes and failures. We are particularly proud that Kautex Maschinenbau has not lost its identity in spite of all the modifications and changes in ownership.

I clearly remember my first day at the company over 17 years ago. Back then, we were part of the Krupp Group. Although we carried the Krupp name, almost all the employees talked about Kautex. This strong connection with the brand really impressed me at the time. Even today, how our employees identify strongly with the company is our greatest asset, and each employee, whether in management, development, in Germany, China or America or wherever in the world is an ambassador for the brand.

It is not just technology that is so important, it is global business with machines and the interaction between people. People can always have good products; however it only works with personal contact and intensive meetings with interested parties and customers on location. This is the only way we learn how requirements change and further develop in the market segments and regions and where the company should focus on. We hardly miss any opportunity to meet with our customers. That is why we are represented at 16 trade fairs throughout the world and give lectures and provide training. To mark our 80th anniversary, we invite you once again to the Open House in our main plant in Bonn.

I would be delighted to personally welcome you as our guest on 23rd/24th September 2015. Take a look back at our 80 year history and marvel at our most recent developments and innovations and let's look towards the future together. The next 80 years of extrusion blow molding as "made by Kautex" has already begun.

Andreas Lichtenauer
Managing Partner

First CoEx fuel tank blow molding system still in use

The sale of the first fuel tank blow molding machine, the KB250, with 6-layer coextrusion process in 1992, signified Kautex Maschinenbau's breakthrough into the US market and marked the start of its global market leadership in the area of fuel tank blow molding machinery. At the same time, innovative multi-layer technology laid the first foundation stone for the commercial success of the manufacturer, Walbro Automotive Corp (now called TI Automotive Group).

In the 70s and 80s, plastic fuel tanks were manufactured in the USA using a single layer of polyethylene. After being blow molded, they were fluorinated on the inside in order to prevent petrol vapor from diffusing through the tank's wall. As there was a tightening of the limits for gas emissions from car fuel tanks in the pipeline in the mid-80s, Kautex Maschinenbau developed a process to manufacture multi-layer tank systems to integrate a barrier layer. The first industrial blow molding machine with CoEx process was presented at the trade fair for plastics in Dusseldorf in 1989. The type KB250 machine was further optimized in subsequent years and converted from the discontinuous accumulator head process to a continuous process. In 1992, the

manufacturer, Walbro Automotive, purchased the test machine, which had been modified several times, for its plant in Ossian, Indiana in the USA.

Six-layer tanks prevail

The CoEx process does not need fluorination. Instead, the blow molded tanks reduce petrol vapor emissions thanks to a so called barrier layer, which is made from a special plastic and located within the tank wall. An adhesion promoting layer is integrated on both sides of the barrier layer. A reclaimed regrind layer enables the reuse of production waste. Finally, another external layer and internal layer made from polyethylene are required so that the new tanks have a six-layer wall. In this



René Vanmarcke,
Retrofit manager
Kautex Maschinenbau

respect, the resulting vapor barrier is better than a coating with fluorine as it reduces the diffusion of gases through the tank wall to a minimum and remains in place for the entire product life of the tank.

The decision by Walbro Automotive

to get into the business of CoEx tanks was an important milestone in Kautex's corporate history. The KB250, which was delivered in 1992, was the first multi-layer CoEx tank blow molding machine on the American market. Just six months later, the Ford Works in Milan, Michigan commissioned the first use of the machine, for which the machine has been specifically designed. During the same year, other machines (types KB250 and KB400) followed for Ford and the Belgian company, Fina, and again for Walbro Automotive in 1994. Kautex Maschinenbau built another KB250 type machine for itself for its Bonn Technology Center (Technikum) for developmental work with regards continuous six-layer coextrusion.

KB250 – A machine goes around the world

"After introducing the six-layer technology, business really took off for Walbro Automotive," recalls retrofit manager René Vanmarcke, who personally installed the machine in the USA over 20 years ago." In October, the plant accepted the production of the first CoEx tanks in Ossian for several Ford models. A milestone for the company, especially since Ford manufactured all other plastic parts in its Michigan plant at the time." The six-layer tanks were then exclusively produced on the KB250 that was purchased in 1992 and which proved to be extremely reliable and was able to produce 500,000 tanks a year. Furthermore, as a

double shuttle machine, it was possible to run two different shapes simultaneously.

The success continued and there were many subsequent orders. The KB250 was constantly improved and additionally equipped with a robot for the parison transfer. This technology enabled the plastic parison, which runs out

"The KB250 has an extremely stable extruder platform. In 2006, we invested in a new control system and reconditioned the closing unit. We are very satisfied."

Michel de Clerq, TI Automotive Group

from the extruder, to be laid in the desired shape without it having to be moved. "The KB250 was, so to speak, our pioneer machine on the US market," recalls Kautex expert, René Vanmarcke. "And it has proven to be extremely reliable and durable: When Walbro was taken over by the TI Automotive Group in 1999, the very first KB250, which was delivered to the USA, was relocated from Ossian to Great Britain. At the end of 2001, it was moved to the TI plant in Belgium due to short notice expanded production, where it today still produces fuel tanks."



Retrofit also now in Shunde

Since 2014, modernization has been underway of used Kautex machines directly in the Shunde plant. The company also presented one of the first retrofit machines from China at this year's Chinaplas in Guangzhou. The machine, a type KB25, which is used to manufacture airflow tubes, was equipped with a 1.8 liter high temperature accumulator head and a low-wear E60 extruder. Furthermore, it is also fitted with a complete suction blowing station following the retrofit.

Contact: mark.lueddecke@kautex-group.com



Mr. Sun Yan, President Yapp

When thinking about extrusion blow molding technology I consider ... that Kautex is the worldwide market leader in the segment of manufacturing extrusion blow molding machines.

The success of Kautex Maschinenbau is based upon ... innovation and good cooperation.

The first Kautex experience I had was... that I could foresee our company will continue to have contact with Kautex.

Kautex machines are for me ... an indispensable parts for future development.

When thinking of Kautex the first thing that comes into my mind is ... the first fuel tank machine we purchased, a KB250.



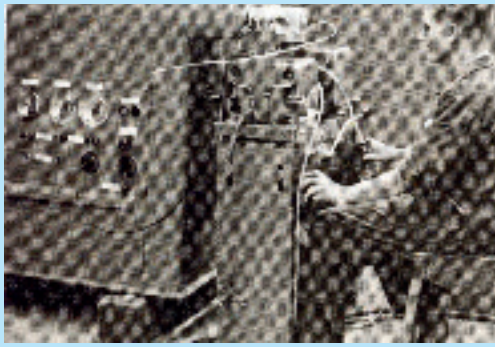
Kautex Maschinenbau is a distinguished pioneer in the field of extrusion blow molding technology and continues to manifest today the entrepreneurial spirit of its then 22-year-old founder, Reinold Hagen. This was never more apparent than at the company's display at NPE2015, featuring one of its KBB machines known for its short cycle times and low energy costs. As the producer of NPE, SPI: The Plastics Trade Association is committed to sustainability and recycling efforts, and therefore takes note of members that share its goals in this space such as Kautex Maschinenbau.

William Carteaux

President SPI,
(Society of the Plastics Industry)

First commercial blow molding machines

With his entrepreneurial mindset and love for experimentation, Kautex founder, Reinold Hagen, led the company from the shrink tube to the development of the world's first standard system for manufacturing seamless plastic hollow containers. Today, more than 6,100 active machines are registered.



First blow molding machine from 1949

It requires a lot of courage and self confidence to set up on your own at the age of 22. Reinold Hagen had both when he formed the Galvanischen Werkstätten (Galvanic Workshops) in Siegburg in 1935. As an entrepreneurial visionary, he became the driving force and head of a company which gained international recognition.

In the early years, Reinold Hagen focused on the surface treatment of metals. Since a replacement had to be found for essential raw materials during the war years, he discovered

new territory, technically speaking, with the processing of the thermoplastic resin polyvinylchloride in the 30s. In 1949, his brother, Theo, developed a process for blow molding PVC shrink tubes. Reinold Hagen experimented further and eventually found a method of blow molding thermoplastic materials in such a way that they kept their shape. Thanks to the stabilization of the raw material situation following currency reform, polyethylene blow molding materials were available for the first time on a large scale. In the same year, the first ever manufactured seamless 10-litre container



Reinold Hagen
1938

was blown on a Kautex machine. The Kautex founder was therefore able to further expand his business from 1950 and started to export the first machines to the US in 1955.

Kautex Maschinenbau – worldwide



International Expansion

Kautex's journey of becoming an international company began with the growth market in the USA and led to the construction of machines in China.

Kautex Maschinenbau, with its 550 employees, 4 subsidiaries, on-site service in 14 countries as well as sales partners responsible for 83 countries, has become the global leader in extrusion blow molding technology. This international focus was built on the basis of supporting customers worldwide as competent partners and reliable service providers. Back in the 60s, Kautex introduced international customer service for this very reason.



Establishment of a subsidiary in the USA

Kautex laid the foundation stone for international expansion in 1955 with the first export of a blow molding machine to the USA. Five years later, the subsidiary, Kautex Machines Inc., was established in Linden, New Jersey. In the 60s, the sales company, Kautex-U.S. Sales Co. Inc., followed in the New York district of Flushing. Between 1997 and 2002, Kautex manufactured machines for the US market at its own plant in New Jersey. However, due to the declining market, production ceased and the focus was on sales and service. For the past

ten years, the US subsidiary in North Branch, New Jersey has been back on a growth trajectory and relocation to a new building with its own Technikum is planned.

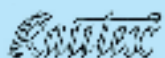
Machine production in Shunde

In 1995, the first German joint venture in the southern Chinese region of Guangdong was formed under the name Krupp Chen. In the same year, production of the successful KEB2 series began, which was replaced by the KCC1 in 1996. In 1999 in Shunde, small quantities of a simple variant for the Chinese market were manufactured as the KCM1. The joint venture ended in 2003 with the exit of the Chinese partners. In 2004, the company was renamed as Kautex Shunde and became a 100% subsidiary of Kautex Maschinenbau GmbH. In recent years, the Shunde location has been used to produce consumer and industrial packaging machines, in particular for the Chinese and South Asian market.

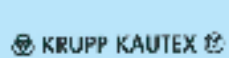


The Kautex Logo through the ages

1946



1979



1950 to 1970



2000



2002



2004



2013



1935

Foundation as
„Galvanische Werkstätten“

1949

First extrusion blow molding machine
to produce PVC hoses

1954

First standard machine: V8

1968

First machines with FiFo®
accumulator head

1973

First worldwide serial produced
plastic fuel tanks

1976

Machine building spin-off to
„Kautex Maschinenbau“

1977

Kautex Maschinenbau becomes
part of Fried. Krupp

1978

First machines with coextrusion
process

1986

First machines with IML
(in mold labelling)

1989

First six-layer fuel tank machine
worldwide

Machine building section is going its own way

As a spin-off from Kautex Werke, an eventful history began in 1976 for Kautex Maschinenbau. Takeovers by companies did not create any major changes for Kautex. In 2005, the company left these hierarchies behind and finally went back to its roots.

Kautex Maschinenbau was established in 1976 as a spin-off and was taken over by Fried. Krupp in 1977. The name was only changed

to Krupp Kautex Maschinenbau GmbH in 1980. This is when Kautex Maschinenbau entered a bigger international market. At this time, Krupp also purchased the blow molding machine builder of the Battenfeld Group (Battenfeld Fischer), without merging it into Kautex. After the merger of Krupp with Thyssen, the ThyssenKrupp group sold its plastics division in the middle of 2000 to SIG AG. It was



then decided to merge both machine builders together under the name of SIG Blowtec, which unsettled customers and employees and led to the loss of market share.

Reflecting on its roots

The turning point occurred with the purchase by Adcuram at the start of 2004. The associate company from Munich led Kautex Maschinenbau back to its roots as a medium sized company. Liberated from the group structures, the newly formed management team of Olaf

Weiland and Andreas Lichtenauer were able to fully focus on the new organization.

Management participates

In March 2007, Steadfast Capital, within the framework of a management buyout, together with a management team consisting of 5 members, purchased 100% of the company shares from Adcuram. In close and trusting cooperation with the investors, the sales of the Kautex Group was able to increase by 75 percent over the next six years and this was in spite of declining

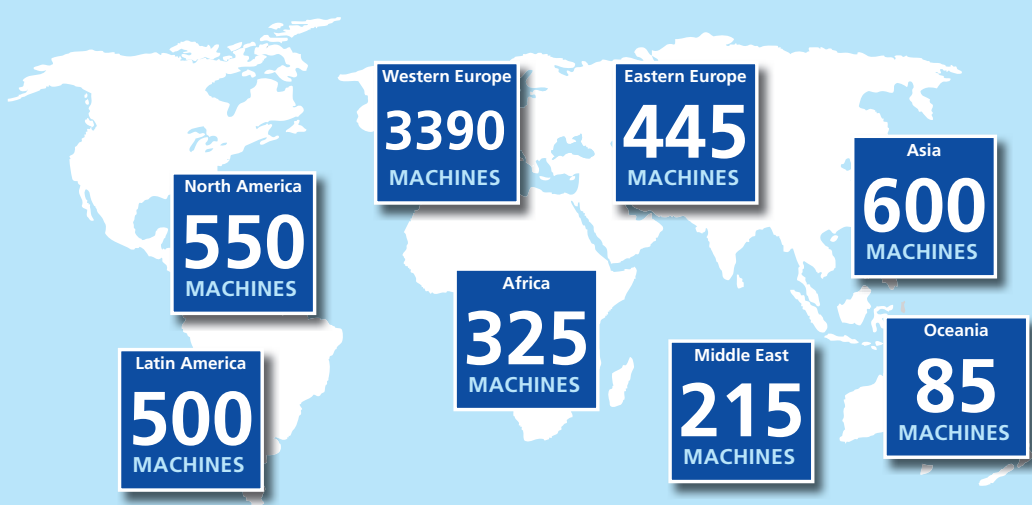


market demand in 2008 and 2009. At the start of 2013, the associate company from Berlin, Capiton AG, took over from Steadfast Capital as investor. At the same time, the management team, along with other employees of the company, increased its share capital to 50.1 percent and since then has been a major shareholder in the Kautex Group.



Installed base

More than 6,100 active machines worldwide.



Solutions for all applications

From the first experimental machine in 1949 to today, Kautex Maschinenbau has been developing the largest global range of extrusion blow molding machines.



Today, the range of machines offered by Kautex Maschinenbau can be divided into Consumer Packaging, Industrial Packaging, Automotive and Specialties. As with every long journey, it always starts with that first step. The first Kautex machine appeared in 1949 and cleared the way for the production of 10-liter tanks as of 1950. In the following four years, the company gradually expanded its range to include the production of cosmetic bottles and only small parts for cars. Over time, the parts manufactured using the extrusion blow molding process became ever bigger and more complex. As there were tanks or containers of up to 100 liters for cars in the mid-60s, the range was expanded in the following ten years for other large volume containers and special products such as, for example, reflector posts for streets. Important milestones in the company's history were in 1969 with the first plastic oil tanks of up to 5,000 liter capacity and in 1973 with the world's first standard plastic petrol tank for Volkswagen.

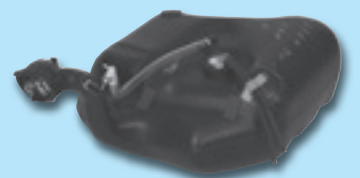
Then between 1975 and 1989, machines were developed for the manufacture of surf boards,



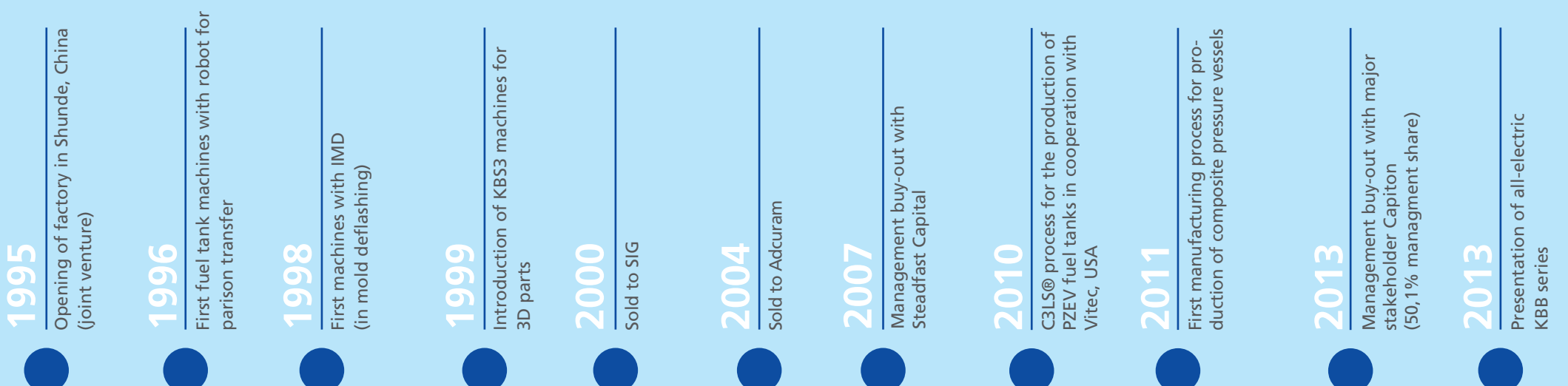
thermo boxes, rear spoilers and bumpers. In 1992, the company succeeded with the first serial manufacture of a six-layer fuel tank. As Kautex Maschinenbau at the time was the only global machine supplier of this type of tank production, the company succeeded in breaking through into the North American automobile market. At this time, Kautex Maschinenbau laid the foundation for its international market leadership with machines for the manufacture of automotive fuel tanks.

At the turn of the century in 1999, Kautex Maschinenbau expanded its range with an economical process method for manufacturing 3D parts. In this regard, complex, geometric shapes, such as those increasingly demanded by the automobile industry, were produced cheaply. These included tank filler necks, ventilation and suction pipes as well as engine parts.

Since 2000, the range has expanded to machines which manufacture air cushioned soles for sports shoes as well as large flat items such as table tops or garden shed walls or even turn-key machines for the production of LPG/CNG high-pressure cylinders for households and the automobile industry.



World's first plastic fuel tank from serial production, 1973



News from the Kautex-Technikum

In this edition of the K-News, we're not just looking back 80 years at the industry's history but we'll also be looking into the future. What trends are shaping the markets, what are the engineers at Kautex Maschinenbau working on and which new products and innovations can the customers already look forward to? Taking a look at Kautex-Technikum will provide a better insight.

Automotive trend: Suction blowing

A trend within the automotive sector, which should not be overlooked, is the downsizing of engines with simultaneous turbo charge. Hence, there is an increased demand for air ducts for the engine intake tract. These are still made from rubber and/or aluminum, however, this is increasingly being replaced by engineering thermoplastics. The suction blowing process is ideal for manufacturing these components. The parts manufactured during the suction blow process have an evenly distributed wall thickness and have no welding seams. This process is great for the OEM as it provides both weight and cost savings.

Engineering thermoplastics materials such as TPE, TPC, PA6, PA66 and PPS can be used in the suction blowing process. They are more suited to the temperature and pressure requirements in the engine compartment and can balance out the movements between the chassis and the engine. Kautex Maschinenbau is currently developing a machine that is especially oriented toward the suction blow process. However, existing extrusion blow molding machines can also be converted to the suction blow process with a retrofit modernization. An example of this is the converted KB25, which was exhibited at Chinaplas in 2015.

Packaging trend: Transparency

In recent years, the demand for transparent materials which can be used in extrusion blow molding (EBM), has been increasing. The leading process of injection stretch blow molding (ISBM) is reaching its limits with regards design freedom. There are still no solutions on the horizon.

The extrusion blow molding process can offer the following options:

- Production of bottles with handles
- Bottles with an angled neck
- Off-center necks
- Coextrusion with several functional layers

During the past months, materials from a total of six different raw material producers were tested on a KCC10S at the Kautex Technikum. Final measures for optimal extrusion equipment as well as process engineering parameters were developed. Products with very good mechanical properties were able to be produced from these processed materials and they comply with the specifications in the drop test in terms of the design. The Kautex experts analyzed every individual case together with

the customer and came up with a solution. It is possible to retrofit existing machines.

Qualification of technical staff



Markus Holbach,
Director Technikum

With regards the area of process engineering, there is an increasing lack of qualified personnel in both the new and established markets. In addition to the training programs developed by Kautex that have been successful for years, the Technikum is also developing user oriented practical

training programs, which are carried out by experienced process engineers at the machines. The training programs that began as internal training measures will be offered to Kautex customers in the second half of the year.

Looking ahead

When looking ahead toward the future, the director of the Technikum, Markus Holbach, is optimistic that the further development of materials and machine technology will ensure that extrusion blow molding will remain attractive and it will be used in new sectors. In order to further develop ideas independently



Air duct in suction blow process

from day-to-day production and test them, the Kautex-Technikum, with its equipment and experienced process engineers, is available to all its customers.

Contact: markus.holbach@kautex-group.com

Kautex Chronicle

Follow the eventful history of Kautex Maschinenbau through eight decades!



80 years of Kautex

Kautex's growth has always been driven by the way it pushes the boundaries in the field of plastics technology. Very often it has forged new paths for the rest of the industry to follow. In the 1930s, company founder Reinold Hagen worked on some of the first applications for an exciting new material – PVC. The company also developed some of the first technology for the production of blow molded plastic bottles and plastic fuel tank systems for the automotive industry. On behalf of the association of plastics processing industry, I would like to wish the management and staff of Kautex all the very best on the occasion of the company's 80th birthday. With its boldness, energy and innovation, a bright future is surely guaranteed!

Dirk E. O. Westerheide

President Association of plastics processing industry e.V.



The detailed company chronicle is available for download from August: Visit our website or scan the QR code with your smartphone.



Mr. Wantae Kim, Senior Director/PFT Process Engineering Division at Donghee

DONGHEE

Kautex maschinenbau is a typical example for ... a history and technology based extrusion blow molding machine supplier with high quality systems that are durable and which will be ready for production directly after installation.

When thinking about extrusion blow molding technology I consider... low cost solutions & knowledge to be competitive in the automotive industries.

The success of Kautex Maschinenbau is based upon... the know-how to produce robust & high quality machine and a long term based knowledge to provide process solutions.

The first Kautex experience I had was... in 2008 when we started up the Coex Plastic Fuel Tank business at Donghee.

Kautex machines are for me a symbol of... robustness, reliability and advanced technology.

For the future I wish Kautex... to be a competitive machine and process supplier to meet low cost solution required in the automotive industries.

Three characteristics I associate with Kautex are ... Quality, Service, Friendliness.

Team of extruder experts



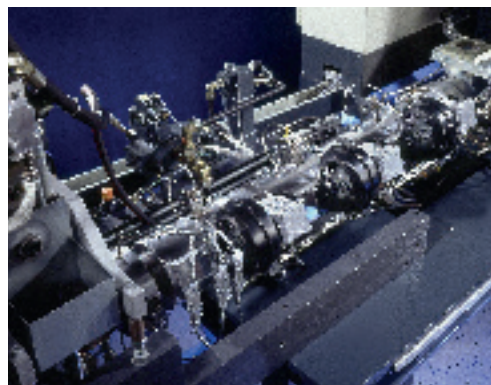
Willi Döhmen,
leader extruder team

The important part of a computer is its processor and the same applies to an extrusion blow molding machine and its extruder. The performance potential of these core components has a significant influence on the performance of the machine.

In order to always meet ever changing market requirements, Kautex has a special extruder team which is devoted to the constant improvement and further development of extruder technology.

In the past year, the extruder team of experts, led by Willi Döhmen, was set up in the Technikum. It is made up of eight members from R&D, Service and Technikum and combines expertise in process engineering, construction and product and test management. At the moment, the team is working on projects to improve homogeneity, to reduce the melting temperature when processing high-molecular HDPE, opportunities to speed up color change, and foam extrusion in the Mucell process.

Contact: willi.doehmen@kautex-group.com



Extruder heating



"Today, Kautex stands for the very best in German mechanical engineering. A growing, innovative company that has built a sound international reputation as manufacturer of extrusion blow molding machinery. Since it was founded 80 years ago, it has stood for continuity, experience and above all the vision to always set the right course. Kautex moved into emerging markets such as China early on, but it has never neglected its commitments at home. Kautex has remained young because of its dynamic growth over recent years, which has resulted in an influx of skilled young workers. Many congratulations on this achievement. I wish Kautex and its staff every success and a bright future!"

Dr. Reinold Festge
President VDMA



Dick Smith, President Agri Industrial

Three characteristics I associate with Kautex are ...

industry-leading technology, innovation and after-sale support. Kautex machines continue to set the standard for quality, reliability, process control and shot-to-shot part weight consistency.

Kautex machines are for me a symbol of excellence ...

from the very beginning our philosophy was to invest in the very best equipment available for our custom molding environment and this decision continues to pay dividends year after year.

When thinking of Kautex the first thing that comes into my mind is ...

high quality machines, high quality people, "Partners".

Projects July 2014 – May 2015

Machine Type	Country	Product
KCC15S	Italy	10l stackable jerry cans
KCC10S	Italy	5 l stackable jerry cans
KCC25S	Italy	20l/22l stackable jerry cans
KBS241 CoEx (robot double)	Iran	Tanks
KBS20-SB (seco)*	South Korea	3D parts
K3D-SB0D*	South Korea	Air ducts
KCC15D	China	435ml milk bottles
KCC15D	China	435ml milk bottles
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KCC25D	China	Small CoEx6 tank for garden tools
KBS241 (mono)	China	IBCs
K3D-HP	Czech Republic	Filler pipes
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KBS241 CoEx (robot double)	South Korea	Plastic fuel tanks
KBB60D	US	24ml oval bottles
KBS241 CoEx (robot single)	South Korea	Plastic fuel tanks
KBS241 CoEx (robot single)	South Korea	Plastic fuel tanks
KBS241 CoEx (robot single)	South Korea	Plastic fuel tanks
KBS241 CoEx (shuttle)	US	Plastic fuel tanks
KCC20D	Nigeria	1l-5l container for agriculture
KCC25D	China	20l jerry cans
KBS120 (mono)	India	Furniture
KCC20D-1150	China	330ml bottles for milk
KCC5S	Egypt	2l jerry cans

Machine Type	Country	Product
KBS241 (mono)	Germany	Seat shells
K3D-SB0D	China	3D parts
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KBS20-SB (mono)*	China	Intake ducts
KBS20-SB (mono)*	China	Intake ducts
KBS20-SB (mono)*	China	Intake ducts
KBS20-SB (mono)*	China	Intake ducts
KBS20-SB (seco)*	China	Intake ducts
KBS20-SB (seco)*	China	Intake ducts
KBSH 2-80	Italy	Filler pipes
KBS241 CoEx (robot single)	South Korea	Plastic fuel tanks
KCC25D	Argentina	20l jerry cans
KSH100S CoEx3	Taiwan	220l drum 3-layer
KBS20-SB (seco)*	China	3D parts
K3D-HPD	South Korea	Filler pipe CoEx7
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KBS241 CoEx (shuttle)	Mexico	Plastic fuel tanks
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KBS241 CoEx (shuttle)	China	Plastic fuel tanks
KCC10D	Mexico	Jerry cans
KBB60D	Germany	Various bottles
K3D-HP	US	Filler pipes
KBB20D	Spain	1l bottles CoEx4
KBB80D	US	1 gallon bottles
KBB60D	Iran	3,75l bottles
K3D-SB20*	China	Intake ducts

*suction blow molding machine

Trade fair marathon for Kautex

Kautex Maschinenbau has already successfully completed most of the events of this year's trade fair marathon, including NPE in Orlando and Chinaplas in Guangzhou.



It's not just heating up at Kautex Maschinenbau's main plant in Bonn. In the first half of the year, the company showcased its extrusion blow molding machines at twelve international trade fairs.

Live production at NPE

Visitors at the NPE in Orlando were able to watch consumer packaging products being made on a KBB60D. As a highlight of the trade fair and for the first time since 2006, the company was able to demonstrate a machine on its 335 square meter stand. The production of 24ml bottles for the hotel amenities business was demonstrated. The machine, which is equipped with a 2 x 12 head, was delivered directly from Orlando to an American customer, Currier Plastics.

Retrofit for Chinaplas

The organizers of Chinaplas reported a new visitor record this year at its trade fair with a total exhibition area of 240,000 square meters.

128,000 enthusiasts travelled to Guangzhou, 35,000 of whom were from overseas. As one of the 143 exhibitors in the German pavilion, Kautex Maschinenbau exhibited a KB25 blow molding machine, which had been modernized in Shunde, at its 140 square meter stand. This machine will be delivered directly to the new cooperation partner, EMS-CHEMIE Ltd. in Suzhou on a rental basis.

Trade fairs with emphasis on gas

Furthermore, Kautex Maschinenbau was represented as an exhibitor this year at trade fairs which focused on LPG, CNG and composite tanks. After successful trade fairs in Dubai and Paris, there will be events in Manila and Singapore in the second half of the year.

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Stop in Teheran

Following stops in Cairo and Lyon, our third Blow Molding Roadshow event took place in Tehran in May, 2015

Despite the ongoing political difficulties in its framework conditions, Iran is and remains an interesting market for German mechanical engineering. This was also proved by the great interest in our Blow Molding Roadshow, which stopped over in Tehran in May this year.

Around 80 interested professionals attended, seeking information at the stand dedicated to the use of blow molding techniques in consumer and industrial packaging.

A broad spectrum of topics

Supported by guest speakers, Klaus Ingenbrand from FHW-Formenbau and Paul Scheidt from Intravis, the Kautex team, based around Guido Krechel, Melanie Woop and Volker

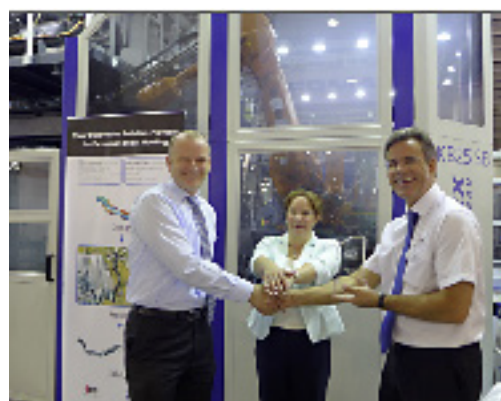
Heim, presented the broad spectrum of production and quality assurance systems for various areas of use. Even the forays into the finishing of gas cylinders and technical parts met with great interest.

The aim of the roadshow is to strengthen company presence in various regions, in order to get to know the markets better and develop closer proximity to customers through

a personal connection. In addition, of course, as well as technical questions, this is also about business topics and demonstrating why a Kautex machine is a worthwhile long term investment.

Further stops are already being planned for the Blow Molding Roadshow.

Bridge waiting time with a rental machine



Andreas Lichtenauer, Managing Partner Kautex Maschinenbau, Magdalena Martullo, Vice Chairman of the Board & CEO EMS-CHEMIE AG and Giovanni Menghini, Executive Vice President EMS-CHEMIE (Suzhou) Ltd. seal the partnership.

Everything came together at Chinaplas 2015 in Guangzhou, China: EMS-CHEMIE (Suzhou) Ltd. is buying a new Kautex suction blow machine for its new Application Development Center (ADC) and in the meantime will have a modernized KB25 on loan from Kautex.

When the Application Development Center (ADC) of the Chinese company, EMS-CHEMIE (Suzhou) Ltd., opens in the Suzhou, China in November 2015 (which is still under construction), the guests who have been invited will be able to examine automobile applications produced with EMS materials and how they are used in the machine. The modernized and used machine type KB25 that was exhibited by Kautex at Chinaplas this year will be provided to the company on a rental basis.

Rental machine to be used until new machine is delivered

The rental machine will be used in China until a Kautex suction blow machine, which has been recently ordered, has been manufactured and delivered to the new Application Development Center in Suzhou. This was mutually agreed by Magdalena Martullo, CEO of EMS-CHEMIE AG and Kautex Managing Partner, Andreas Lichtenauer at the trade fair in Guangzhou. As a result, the official opening ceremony of the ADC building can go ahead as planned in November 2015.

EMS-CHEMIE (Suzhou) Ltd. produces special polyamides, which are used to manufacture, amongst other things, turbo charge ducts in the automobile sector. Moreover, the company

specializes in high performance polyamides, which work in a temperature range of up to 250 degrees Celsius. EMS-CHEMIE (Suzhou) Ltd. was also awarded the Premium Quality Supplier Award 2015 at Chinaplas. For the first time, the Kautex plant in Shunde rewarded the excellent performance of partners and suppliers.



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