ideas full of energy!
Standardkessel

85

GOOD REASONS AND MORE TO CELEBRATE.
STANDARDKESSEL: 1925 TO 2010.

Company founder
August Fasel

1925

Born in Gelsenkirchen in 1875, chief engineer August Fasel, after working at Oberhausen Gutehoffnungshütte, Krupp, and the Ketzer boiler factory, takes the step to be independent. The company he founds is dedicated to "installing central heating and repairing boilers".

The '30s

The world economic crisis. Standardkessel manufactures and supplies shell boilers. Production still carries on in a backyard in the Wanheimerort district of Duisburg. The first patents are registered.

AN 85-YEAR COMPANY HISTORY – AND ANYTHING BUT STANDARD.

Dear business partners, employees and friends, who would have thought at the beginning of the last century that Standardkessel would one day celebrate its 85th anniversary and become one of the 21st century's last remaining traditional boilermakers? In the middle of the last century there were still several dozen such firms, many of them associated with steelworks, mines and mechanical engineering operations. But over the years more and more of them began to slip off the screen.

Standardkessel remained. It remained because it always managed to adapt to changing circumstances and overcome adversities. And above all, it was the Fasel family who, with their vision, entrepreneurial courage and regular technological innovations, turned the modest Standardkessel enterprise into a brand which is known to this day for quality and reliability.

Obviously, none of that would have been possible without committed, competent employees, and this applies today more than ever before. We owe them our gratitude. As employers, we can be proud of our workforce. Their dedication, flexibility and expertise have always been our most important asset, and will remain so in the future.

We would also like to thank our customers, who have been investing their trust in us for many years. That in turn motivates and drives us to excellence in our work together. In the end, the economic well-being of many businesses, as well as that of our industrial society as a whole, will depend on how efficiently energy can be supplied.

This is a challenge we are ready to take on. We are historically obliged to – at least for the next 85 years.

Jörg Klasen

Lutz Reinery

Managing directors of Standardkessel 2010:
Jörg Klasen, Lutz Reinery

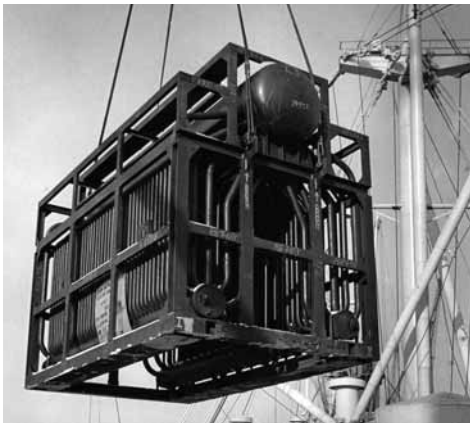
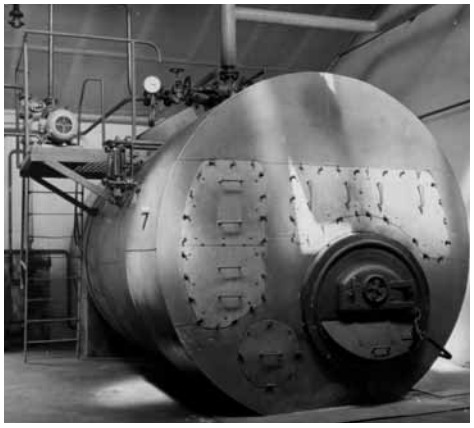
1936

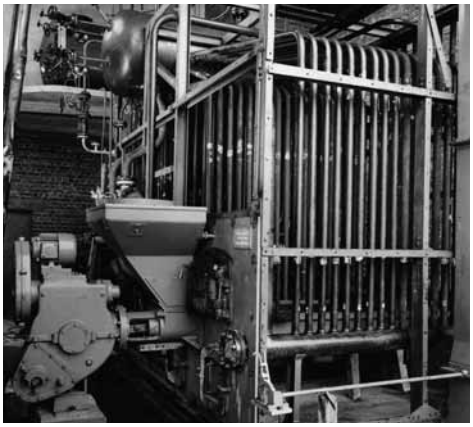
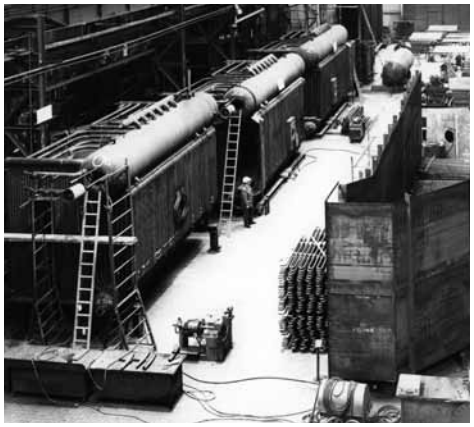
The company is renamed "Standard-Kessel-Gesellschaft Gebrüder Fasel". August Fasel's sons, the engineer Josef Fasel and the merchant Wilhelm Fasel, take over the management of the company.

1942

Josef Fasel falls on the Eastern Front during the turmoil of the Second World War. From now on Wilhelm Fasel must direct business without his brother. It is a difficult prospect, since production is severely limited following multiple bombings.

The company focuses on the manufacture and sale of high-pressure and low-pressure boilers and steel heating boilers. New production methods are introduced, including the transition from riveting to welding.


PERFORMING SAFELY ALL ALONG THE LINE.

1945

In spite of severe shortages of material after the War, the company succeeds in restarting production. The production of steel boilers is, however, stopped. Standardkessel now concentrates exclusively on the planning and building of complete boiler plants for industry and for district heating schemes. In the case of district heating, the pioneering three-pass flame tube boiler begins to become the market leader.

1951

The *Condorkessel* is presented for the first time at the Hanover Trade Fair. This boiler is a ready-to-use system in which the pressure tank forms a closed unit together with all of the auxiliary and additional systems and devices. It is a pioneering solution which is easy to install.

Safety may be an inseparable aspect of every Standardkessel system today, but things were not always that way. At the end of the 19th century, safety was still an uncomfortable subject throughout the industry. In the early days of industrialisation the main, all-eclipsing focus was on the quenching of industry's enormous thirst for energy. That in turn meant a relentless increase in boiler pressures and the materials were subjected to higher stresses.

There were consequences. A series of serious boiler bursts claimed numerous lives. Pressure on the manufacturers grew. In 1886, a particularly catastrophic explosion in Mannheim acted as a kind of "Big Bang", precipitating the founding of the German Steam Boiler Monitoring Association, which in fact later went on to become TÜV, Germany's world-famous general testing and inspection institution. In 1920 a group of owners of large-scale boilers came together to form the VGB (which originally stood for Union of Large-scale Boiler Owners, but which later went on to become a major power industry association). The basic idea was not to look for faults in finished boilers, but to avoid them at the start. This was an unusual approach at the time and they went about improving construction, materials and therefore safety throughout their operations. Accidents were analysed and conclusions derived from them. It quickly became clear what a good decision it had been for everyone involved. Throughout the 1930s people worked together to unify boiler types, standardise components, and develop the first-ever non-destructive X-ray testing procedures. Technical progress was unstoppable – from flow analyses in the combustion chamber, to the automation of controllers, to the demineralisation of feed water. A few years later, the combined steam output of all the boiler systems operating in the market amounted to 230,000 tonnes per hour – a pioneering feat from today's perspective.

Nobody can tell what new developments the boiler industry will produce in the future. But one thing is for certain: there will be plenty of new things to look forward to at Standardkessel.

The Standardkessel range's top export model all the way up to the 1980s, with more than 20,000 units sold: the *Condorkessel*.

1953

As part of its diversification a new business unit for apparatus building and high vacuum technology was started by Standardkessel. These equipments are used in the chemical industry, in metallurgy, and in related branches of industry. Business develops positively. In 1960 this business area is incorporated into Standard-Messo Duisburg GmbH & Co. KG, and in 1976 it is sold off to Mannesmann AG, Düsseldorf.

More than 20,000 units are supplied all over the world right up into the 1980s, especially in South America.






THE WORK HAS CHANGED, BUT THE PASSION HAS REMAINED.

1954

Since there are design-related limits on large water space boilers, Standardkessel begins to build water tube boilers. The first project is a boiler with an output of 2.5 tonnes of steam per hour, built for the Engineering College in Duisburg.

This signals the beginning of the Water Tube Boiler Division, which today represents the cores business of Standardkessel GmbH.

Beginning of the 1960s

The product range now incorporates shell boilers, apparatus building, and water tube boilers. Boiler technology originating in Duisburg can now be found in 60 countries around the world.

What makes working at Standardkessel so special? What are the requirements to work there? The answer to that is different to what it used to be. When Standardkessel had its own production sites it needed capable efficient skilled work people. They were required in Netherlands, Italy, France, Spain, Portugal and Turkey. Those were the countries where Standardkessel had own production facilities.

Today things are different. As an engineering company, Standardkessel employs technically trained specialists alongside commercial employees. Our technicians range from electronics engineers to technical draftsmen and designers to engineers from a wide range of disciplines.

But there is something which our workforce has always had: passion, and the ambition to perform to the best of their ability. This must certainly be one of the major reasons why Standardkessel has managed to keep going so successfully for 85 years.

Process technologies have become more developed and the tasks facing Standardkessel engineers have become more and more complex in recent times. The documentation of a project used to fit into a single folder, now it fills an entire filing cabinet. In order to fulfil its orders and maintain its high quality standards in the face of stringent demands on time and cost, Standardkessel places great emphasis on the training of its personnel. People undergoing commercial and technical apprenticeships at the company are usually taken on into full-time work, and enjoy ongoing training and promotion. Staff turnover has always been a minimum at Standardkessel. This indicates how comfortable people are working there. It is not uncommon for people to celebrate their 40th anniversary of working at Standardkessel, and we hope to see many more such occasions in the future.

The biggest export hit of all is the *Portakessel*, a pre-assembled water tube boiler distinguished by its easy transportability and quick assembly on site. Standardkessel expands, forming subsidiaries and branches, and granting licences. The year 1961 sees the formation of

Standardkessel Fasel B.V. in Venlo, which is later merged with the Bronswerk boiler company in Utrecht once the latter has been taken over in 1983. The year 1962 sees the formation of Standardkessel Italiana S.p.A., Milan, and Standard Fasel S.A., Cernay.

1965

Standardkessel introduces the thermal oil boiler for pressure-free heat transfer. Pipe coils are used to heat thermal oil in closed circuits. In order to increase efficiency further still, the engineers at Duisburg develop solutions for the cogeneration of heat and power, and for combined cycle processes.

»STANDARDKESSEL WAS OUR LIFE«

Franz Coenders, 82, who until his retirement was director of the Water Tube Boiler division at Standardkessel, began his career in Duisburg as a development engineer in 1962. He later became a project and design director, working among other things on the first standardisation of the *Portakessel*. In 1993, following his retirement, he joined the Wilhelm Fasel Foundation, demonstrating his ongoing attachment to the company. This foundation promotes activities aimed at overcoming divisions and encouraging understanding between peoples and nations. It also supports social and charitable activities and promotes the idea of a social market economy.

Looking back over 30 years of experience: Jörg Klasen and Lutz Reinery, managing directors of Standardkessel, spoke to the former director of the Water Tube Boiler division, Franz Coenders.

Mr Coenders, Standardkessel is celebrating its 85th anniversary. Tell us about your early years with the company.
Before coming to Standardkessel in 1962 I worked at Babcock. At the time they were setting up a new development department, which of course aroused my curiosity. That is how I moved over into that department, where I learnt the actual business of making boilers.

I was a keen reader of the engineering magazine *BWK*, and one day I noticed an interesting job advertised there. A company called Standardkessel was looking for a development engineer for the construction of water tube boilers. Like I say, it sounded very interesting, the only thing was, none of the people around me had ever heard of Standardkessel – and I definitely hadn't. But nevertheless I thought to myself, you never learn if you don't try, so I applied for it and straight away received an invitation for an interview. Back then the company was still based at Wilhelmshöhe in Duisburg. Wilhelm Fasel was the sole managing partner, and Hermann Diepenbrook was his sales manager. Hermann's brother Heinrich was the technical director and worked on the same premises. The two of them were almost inseparable, and as it is often the case with twins, almost indistinguishable as well.

»The original boiler profile looked like a barn door.«

In what way was working at Standardkessel different from working at Babcock?
At the beginning the difference was mainly one of magnitude. At Babcock I had been involved in developing the first 1,000-tonne boilers. They were still a long way off, but that was some of the work we were doing. The first thing I was to encounter at Standardkessel, however, was a boiler weighing just 1.5 tonnes. Given the contrast, you can imagine how it felt.

1971

Wilhelm Fasel celebrates his 60th birthday. He is one of the most prominent personalities in Duisburg industry.

1975

The oil crisis triggers a development offensive. Systems utilising stationary fluidised bed combustion are developed and built for use with the local fuel, coal. Standardkessel also develops systems for the combined cycle process, which soon become a highly successful product in the water tube boiler area.

1978

Werner Bender and Dr Eckardt Hein join the management team.

»When we started getting our first big orders it caused quite a stir in the boiler market.«

That brings us nicely onto the subject of size. Standardkessel's Water Tube Boiler division was then still relatively new when measured against the traditional boilermaking companies. How did your rivals respond to you?
When we started getting our first big orders it caused quite a stir in the boiler market. The big companies thought to themselves: "My God, there's something happening there that we don't like. It should be us building those things!" We on the other hand wanted to make further inroads into a field which suited us more than making simple heating boilers for local authorities and American army barracks. Of course, part of the reason we wanted more was that in the early days we only got to see a small slice of the overall investment in large projects, and that was the boiler – but never the whole cake. In fact our actual objective was to build complete industrial steam-generating plants.

How did you develop to become complete system suppliers?
As Standardkessel grew, so, too, did our range of systems, such as the first ever "bark boiler", which we built for the papermakers Papierwerke Waldhof-Aschaffenburg AG (Stockstadt factory). Then when the first combined cycle power stations appeared, our first project in that field was for Shell in Godorf. These experiences served us well later on. We gradually became more and more free, and were able to move steadily into the market for bigger plants, without constantly asking ourselves, "Can we handle this?" I still remember a lot of the construction plans to this day, although there's no need to go into all that now. But the 190-tonne plant we made for Krupp Rheinhausen was, of course, incredible, and it was our first really big order.

So was that the first real assault on the big boys?
Well, I don't know whether you can really say that. What I do know is that the big, established firms began to put us under more and more pressure. Lentjes, for instance, only wanted to build enormous boilers, so we began to move into the gaps which Lentjes had left behind as it grew. But then they began to notice that they were neglecting the normal boiler sector, and when that happened we really had to fight hard for orders.

Lentjes went so far as to try to push us right out of the market altogether. They never managed. That may well be partly because we were all so attached to our company. To us, the workers, Standardkessel wasn't just our company, it was our life. But our real strength lays in our diversity. In the industrial sector, we actually built everything there was to be built.

1982

A coal-dust-fired boiler delivered to PWA Stockstadt marks the biggest order to date. The boiler has an output of 165 tonnes per hour. More and more ambitious plants are produced in the years that follow.

1985

In order to prepare the family-owned company Standardkessel for the future, Wilhelm Fasel sells 50 % of the business to Lentjes, a competitor based in Düsseldorf.

1990

Metallgesellschaft takes over Lentjes – and with it Standardkessel. In the same year Standardkessel purchases Vorwärmer- und Kesselbau Köthen GmbH, which had been building small water tube boilers in the former East Germany, and which stays with the Standardkessel Group up until 1997.

Not only that, you also did plenty of new things inside the company as well.

Oh yes, in Switzerland, for example. Every year the people referred to as the "Management Circle" went on a trip, preferably to Lake Lucerne. The landscape there is beautiful, but actually it was more about business than pleasure. We talked about the past, the present, and also the future. I still like to think back to one key moment: my colleagues and I were having a hard time convincing management – and, of course, Mr Fasel – that we should be focusing more on big boilers rather than small water tube boilers. Our argument was that one hour spent working on a small boiler produces almost nothing, whereas an hour spent on a big boiler generates much more on account of its size.

»It's not often that a new boiler house is built in the middle of nowhere.«

If I want to earn 50 million euros building small boilers, I need much more staff than I do to earn 50 million euros building big boilers. This, of course, affects profits enormously. We did in the end manage to persuade Mr Fasel and awaken his enthusiasm for big boilers. I must say, although putting all that into practice was very, very protracted and difficult, it did in the end pay off for Standardkessel and its employees.

Was the idea of standardising certain systems such as the *Portakessel* also an attempt to improve your profit situation?

Yes and no. The *Portakessel* you mention was at the time the first oil and gas boiler which could be fuelled alone or in combination with solid fuels, mainly coal. It was also the first thing I was involved with when I moved to Standardkessel. The task was to standardise it. That was back in 1962. The original boiler profile looked like a barn door – or like a big portal, although that had nothing to do with the name Porta, which was simply from the word "transportable". Outside were the convective parts and in the middle was the combustion chamber. In the end, after all our deliberations and examinations, we settled for a different boiler profile, the bi-drum boiler.

This design was more economical to manufacture and had other advantages as well. Some of our rivals also offered similar systems. But what we can say is that we developed and built this type of boiler at a size inconceivable at the time, up to 100 tonnes per hour. In spite of the lead we had, we soon realised that standardisations of that kind can quickly get you stuck. You quickly get dependent on them, and think little more about it. We even had pre-printed tender offers for whole plants.

1993

Even more ambitious systems are produced in the years that follow, such as a 45-million-Deutschmark order from RWE-DEA placed in 1993 for the construction of two 135 t/h boilers, which run using gas, heavy oil and turbine exhaust gas.

1997

In 1997 and 1998, Lentjes takes over 100% of the Standardkessel Group. LIK (Lentjes Industriekessel GmbH) is integrated into the Standardkessel Group.

1999

The crisis in the German power plant industry, which at its peak leads to the insolvency of Standardkessel's mighty rival Babcock Borsig in 2002, also forces Standardkessel to undergo widespread

»The 190-tonne plant we made for Krupp Rheinhausen was, of course, incredible.«

The project manager didn't have to think much, he just wrote in a few numbers and that was the complete job.

But when we began to enter the industrial boiler sector this was no longer possible, since off-the-rack boilers were not what was called for there. After all, it's not often that a new boiler house is built in the middle of nowhere, you usually use an existing one. That means the boiler has to get into the house, the house doesn't have to fit around the boiler. And with all the building regulations and specifications and special circumstances, standardisation really wasn't very helpful.

Let's move from the drawing board to the lectern, where you have often stood on Standardkessel's behalf.
You see, at Standardkessel it's all about variety. But those were technical talks, not really lectures, or to put it another way, they were lectures which were born on the drawing board. It was a good opportunity to get our products known, and, with them, us. We went to TÜV in Germany, the Association of Large Power Station Operators, and engineering conferences in Belgium – those were always fascinating business trips for us.

So now that we have looked back into the past – do you still follow developments at Standardkessel today?
Once Standardkessel, always Standardkessel! But seriously, I still feel very attached to the company. Those were fine, memorable working years for me. That's why I'm glad that Standardkessel is still sticking at it. There's obviously a "survival gene" in there somewhere. I certainly wish you two all the best for Standardkessel's future, and I hope that fortune smiles upon you. As a company you need that, even with all the technical expertise in the world.

Mr Coenders, thank you for your encouragement and for talking to us. We wish you all the best, and above all the best of health.

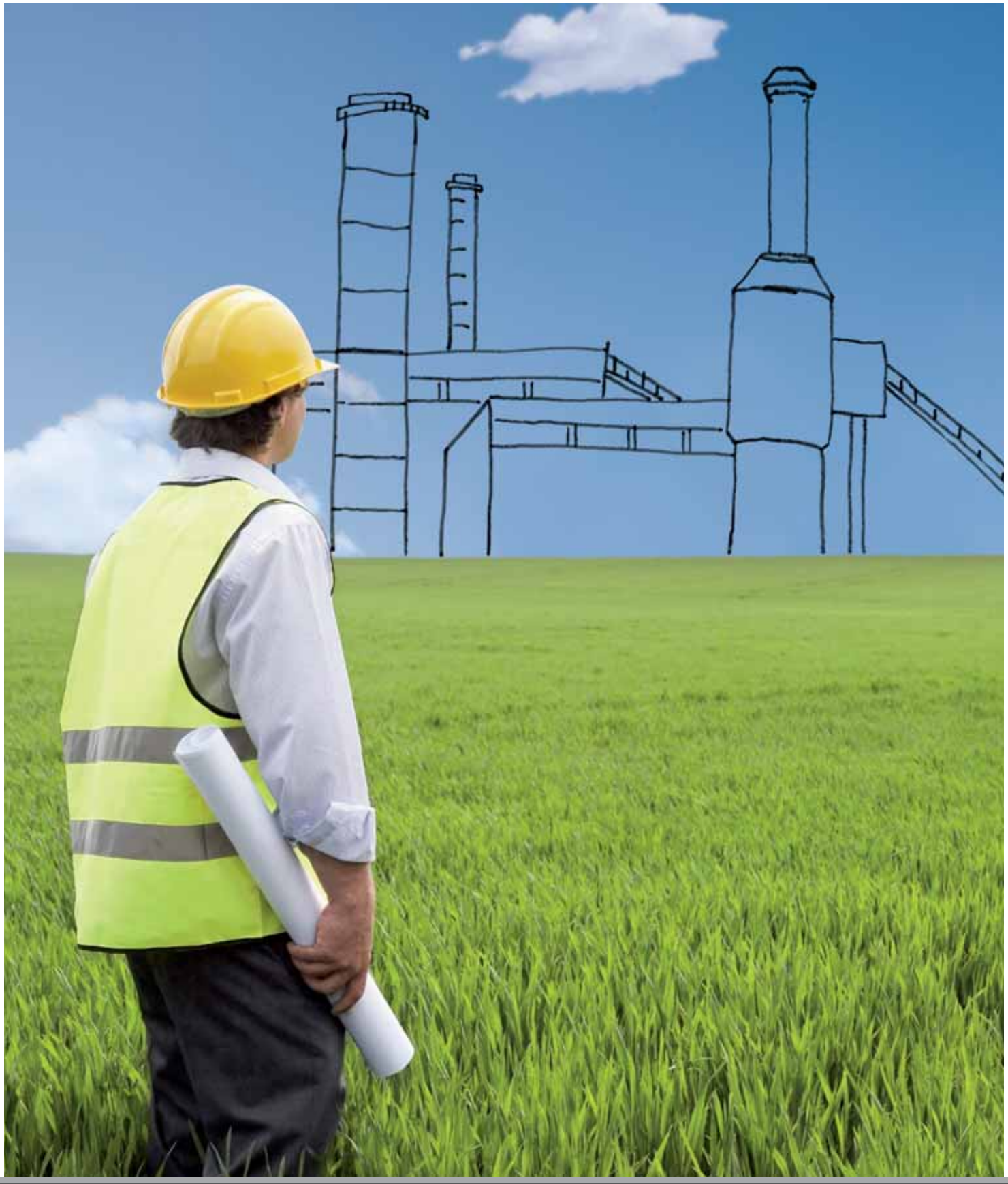
Veteran throwback:
the old Standardkessel logo.

2001

restructuring. 1999 sees the closure of all production in Germany.

The large water space boiler and water tube boiler business areas are separated. The former is sold off and merges with Vorwärmer- und Kesselbau Köthen GmbH to form VKK Standardkessel Köthen GmbH. The Water Tube Boiler division is incorporated into another company, known today as Standardkessel GmbH.

The water tube boiler business develops very positively after that, in particular on the back of a boom in biomass and combined cycle technologies.



2002

Standardkessel receives an order to erect the boilers for two combined cycle power station lines in Dünkirchen, which at full output will generate 2x 400 MWel and which run on a combined cycle process which at the time is a world first. Entering into the large-scale power station construction industry represents a significant challenge for Standardkessel. In spite of many unforeseen factors, by the end of the project Standardkessel has performed an outstanding technical achievement.

2004

Metallgesellschaft decides to sell its entire plant manufacturing operation. The Dutch financial investment company HTP Investments B.V. takes over the Standardkessel Group, which owns not only Standardkessel but also Baumgarte.

THE FUTURE NEEDS PLANS. WE HAVE PLANS, AND WE HAVE A FUTURE.

What can our customers expect from Standardkessel? After 85 years, pausing and taking a look back into the past not only shows you how things were then. It also lets you draw conclusions about the future. And at Standardkessel, these conclusions look positive. After all, the experience and expertise garnered from thousands of water tube and Condor boilers certainly provide a firm foundation from which to master new challenges. Some of these challenges will lie in the ever-more-complex processing technologies which go well beyond the boiler alone. This means things like combustion systems, flue gas cleaning, water/steam cycles and turbines.

What we are aiming for in that respect is to advise our customers on the whole picture, and to develop customised energy concepts – regardless of which kind of fuel is going to be used. One thing in the end is clear: global demand for energy will continue to grow. Satisfying it will be impossible without intelligent, inventive boiler technologies.

We are no less confident when it comes to service. Europe's large number of older plants prompted us to set up our own separate company in response to the rising demand for plant servicing – beginning with intelligent engineering for modernisation and operation improvements, on to assembly and commissioning, all the way to maintenance and complete operational management. Positive feedback from our customers has demonstrated that this has been the right decision.

In order to meet even more of our customers' requirements we now offer contracting solutions as well. These include feasibility analyses, engineering, operator models for financing, approvals, construction, operation and maintenance.

To sum up: we are adapting our solutions to the new changing circumstances. That is what made Standardkessel strong in the past, and we are ready to keep things that way.

Ready for the future: Standardkessel has the expertise needed to convert a wide range of fuels into energy.

2007

In a management buyout, and with the support of a private Belgian partner, most of the shares in the Standardkessel Baumgarte Group are taken up by management, thus making Standardkessel independent again, and owner-run, as it was in the days of the Fasel brothers.

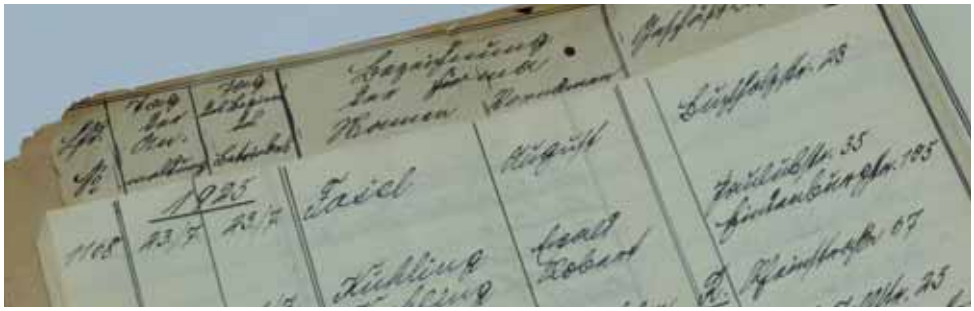
2009

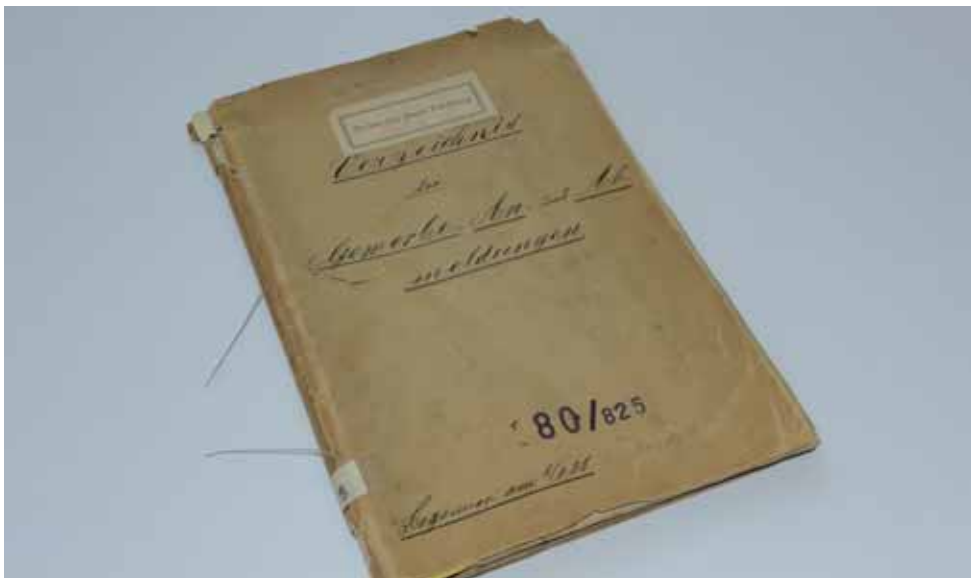
Wilhelm Fasel, the son of the company's founder August Fasel, dies at the age of 98. He was not only a charismatic entrepreneur, he was also a long-time supporter of the local community. In 2008, for instance, his donation of €1.75 million played a fundamental part in the preservation of Duisburg's Liebfrauenkirche.

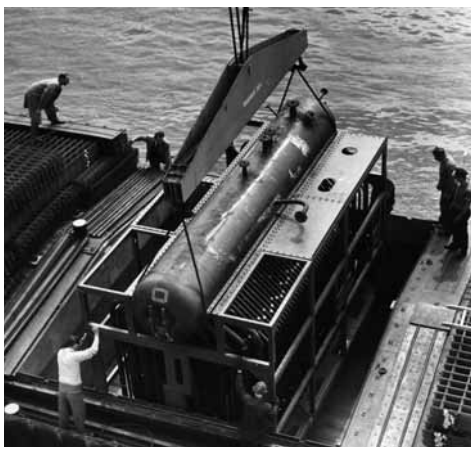
2010

In its anniversary year, Standardkessel can look back on a varied, and very successful, 85-year company history.

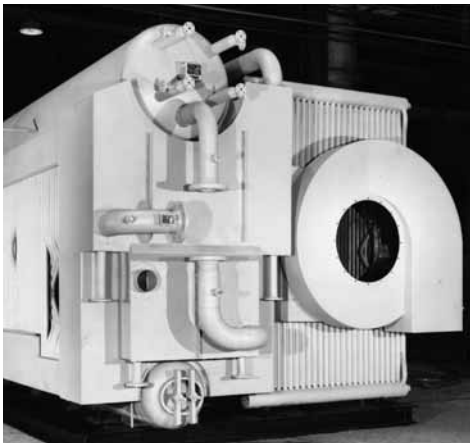
IN THE REGISTER OF COMPANIES IT WAS JUST A SINGLE ENTRY. IN REAL LIFE IT WAS A PASSION FOR EVERYTHING TECHNICAL – MEGAWATTS, BAR AND DEGREES CELSIUS.

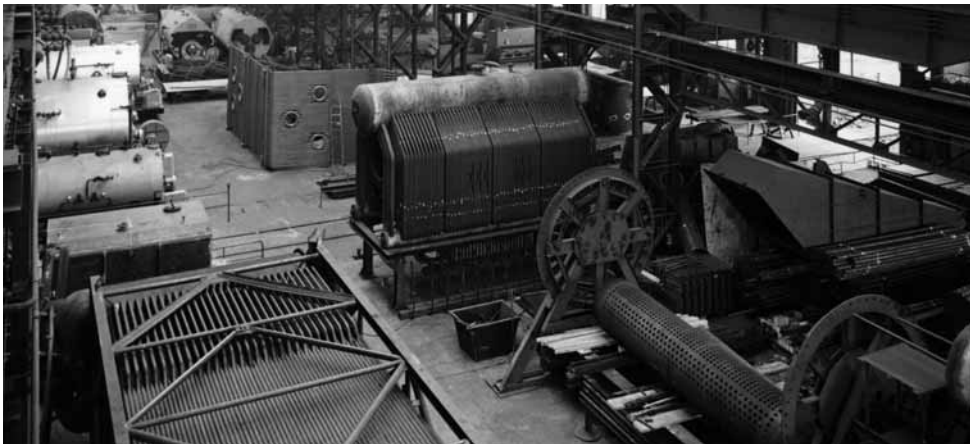


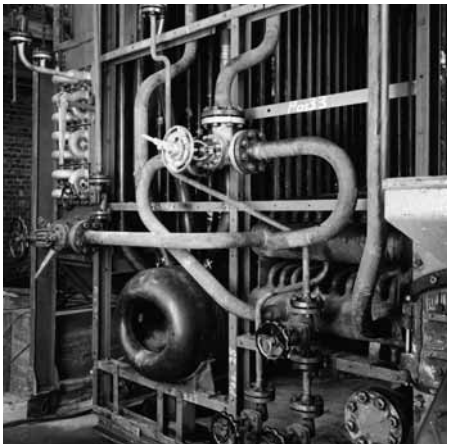





STANDARDKESSEL







STANDARDKESSEL AND BAUMGARTE.
EACH ONE STRONG, TOGETHER STRONGER STILL.

75 years of Baumgarte and 85 years of Standardkessel: together that makes 160 years of experience and expertise in the field of power systems and boiler engineering. Reason enough for these two long-standing companies to work together under a common roof and in one group. Baumgarte will remain Baumgarte, and Standardkessel will remain Standardkessel, each one independent, each with its own particular fields. But together they will be stronger, and able to respond even better to the needs of their customers.


1925 - 2010
Standardkessel
1935 - 2010
Baumgarte

160 YEARS OF EXPERIENCE.
TAKE A LOOK.


160 years
ideas full of energy!
1925 - 2010
Standardkessel
1935 - 2010
Baumgarte