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Dear readers,

Satisfied customers are the most essential criterion for the success of any business. At DEUTZ, we have made it our first and foremost priority to fulfill the individual wishes and needs of our customers. In their interview on pages 6 and 7, DEUTZ CEO Dr Frank Hiller and Fred Kaminski, Director of Central Quality Management at DEUTZ, explain how we achieve long-term customer satisfaction and how our new quality management system DEEP contributes to this.

Dr Hermann Simon, founder of the management consultancy firm Simon-Kucher & Partners and a leading expert in the field of pricing, knows that quality has a considerable influence on prices. During his visit to our headquarters in Cologne-Porz, the economic expert set aside some time for an interview with DEUTZWorld, in which he explained why DEUTZ has held a special place in his heart since his early childhood.

Not least because of its name, DEUTZ has always been closely linked to the district of Cologne-Deutz. For more than 100 years, the company was headquartered in this area, and its entire company history is intimately interwoven with this part of Cologne. Following a decision made in May, the site is now scheduled to be sold to a Düsseldorf-based property real estate project developer. The relocation of the Cologne-Deutz site has been completed. Turn to page 8 to find out what exactly we are planning for the site and how the sale will contribute to the growth of direly needed residential spaces in Cologne.

Incidentally, “growth” is also the first word that comes to our minds when we think about the Chinese market: over the course of only three decades, China had developed into a modern economic power. Over the past years, German companies have conducted very successful business there — including DEUTZ AG with its joint venture, DDE. But China, too, is facing increasingly strict emission legislation. This topic poses a great deal of new challenges to engine manufacturers, requiring both modifications to the machines and individual adaptation to local requirements. In his interview with DEUTZWorld, Dr André Philipp, Chief Technical Officer at DEUTZ (Dalian) Engine, told us how DDE and DEUTZ are tackling these challenges (pages 12/13). Another company that is doing truly remarkable work is our Spanish DEUTZ subsidiary. It recently received a high honour, as the Spanish King Felipe VI conferred an honorary medal to DEUTZ Spain (page 16). We extend our warmest congratulations!

Once again, the best DEUTZ dealers in the EMEA (Europe, Middle East and Africa) region were invited to a meeting in Cologne-Porz and honoured for their excellent work. Find out everything about the successful event (page 22)!}

We hope you enjoy the read.

Your,
DEUTZWorld editorial team
DEUTZ at CONEXPO 2017 in Las Vegas

In March 2017, DEUTZ presented its expanded portfolio of products with a cubic capacity from 2.2 to 18 litres at CONEXPO in Las Vegas. DEUTZ presented multiple new gas and diesel engines, including the newly developed 9.0 four-cylinder diesel engine and the six-cylinder TCD 12.0, TCD 13.5 and TCD 18.0. The company further showcased its TCD 2.2 three-cylinder as a diesel and a gas version and a gas variant of the trusted TCD 2.9 four-cylinder. The new TCD 9.0 was the absolute highlight of the DEUTZ booth in Las Vegas. The four-cylinder diesel engine offers a performance of 200–300 kW and a torque of 1,700 Nm. Thanks to its extremely compact design, it is easily installed in a variety of machines – especially excavators and wheelbearings. In addition, DEUTZ presented two serial six-cylinder engines, the TCD 12.0 and 13.5, with up to 400 kW/2,500 Nm and 450 kW/2,800 Nm, respectively. Much like the TCD 9.0, they adhere to a uniform family concept with a shared customer interface and a high percentage of identical parts.

From now on, the upper end of the performance scale will be represented by the DEUTZ TCD 18.0, which is also designed as a straight-six unit and was presented for the first time during a press conference at CONEXPO. The engine reaches a performance of up to 620 kW at a torque of 3,600 Nm. All four engines TCD 9.0, 12.0, 13.5 and 18.0 are part of a cooperative project conducted together with the Liebherr Group. DEUTZ plans to distribute the engines produced by LIEBHERR under its own brand and offer them for purchase to the customer.

The five TCD 12.0 engines were presented to the market under the name DEUTZ Xchange programme. A panel discussion titled “Company customers who upgrade engines under the DEUTZ Xchange programme achieve a cost-cutting” was held in Baden-Baden. More than 450 experts from Germany and the rest of the world were in attendance. The DEUTZ Xchange programme has expanded from the TCD 18.0, which was presented for the first time at CONEXPO, to the new, more powerful TCD 12.0. The programme also includes the TCD 2.9, which was presented for the first time at CONEXPO. The DEUTZ Xchange programme currently has a total of around 1,000 customers. Deutz is similarly on point: around 50 employees are working on the programme. A panel discussion titled “Company customers who upgrade engines under the DEUTZ Xchange programme achieve a cost-cutting” was held in Baden-Baden. More than 450 experts from Germany and the rest of the world were in attendance. The DEUTZ Xchange programme has expanded from the TCD 18.0, which was presented for the first time at CONEXPO, to the new, more powerful TCD 12.0. The programme also includes the TCD 2.9, which was presented for the first time at CONEXPO. The DEUTZ Xchange programme currently has a total of around 1,000 customers.

DEUTZ goes social media – it has been exactly one year since DEUTZ started its marketing activities in the social media under this motto. It started with a YouTube and a Facebook account, which were soon followed by profiles on LinkedIn and Instagram. The success of these media measures quickly became apparent: after only five months, the DEUTZ Facebook page had accumulated 2000 fans, and now – one year later – the number has risen to more than 3900. This is especially thanks to the large amount of interesting content DEUTZ shares with its followers.

During the past year, the DEUTZ Social Media Team posted more than 500 product news, pictures and information in German and English. The company community gets to enjoy a wide range of posts, from historical memories on Throwback Thursday to new engines from technology and daily photos and reports from international trade fairs. And the Instagram activity of DEUTZ is similarly on point: around 50 photos are available to fans of the DEUTZ brand, and the company has acquired almost 300 followers on this platform, too. The DEUTZ YouTube channel has been successful, too. It contains many films and videos related to DEUTZ, including some historical treasures such as the popular DEUTZ adverts from the 1990s and 1980s. If you have not yet had a look around the DEUTZ social media world, click here:

https://www.youtube.com/user/DEUTZdigital
https://www.instagram.com/deutzofficial
https://www.linkedin.com/company/deutzofficial

DEUTZ in dialogue

Hardly any topic is being debated as hotly as the future of drive technology. DEUTZ has already taken part in two renowned industry events this year and is an active contributor to this dialogue. Between 21 and 22 February, the 4th International Engine Congress was held in Baden-Baden. More than 450 experts from Germany and the rest of the world were in attendance. The DEUTZ experts presented new engine concepts, fuels and alternative fuels to discuss the future of combustion engines in cars and utility vehicles; the topic of new and alternative fuels was the main theme of this year’s programme. A panel discussion titled “Combustion engines in the era of global mobility and sustainability” constituted the highlight of the specialist segment of the congress, comparing electric drive units and combustion engines using renewable fuels in terms of their potential to reduce CO₂ emissions.

Dr Markus Schwaderlapp, Director of Research and Development at DEUTZ, and his colleagues Wilhelm Feuser and Kai Tiedtke contributed by delivering a lecture titled “The new diesel and gas engine family for the torque output range”. The DEUTZ experts illustrated the particular requirements of industrial engines for functionality and durability.

In April 2017, DEUTZ had a very special idea: on the occasion of the EMEA meeting at the Technirium, the company transformed its foyer at the Cologne-Porz headquarters into a service centre. At the so-called Service Info Day, DEUTZ service staff organised an in-house exhibition to provide information about the versatile and extensive service range of the company. This event was not limited to participants of the EMEA meeting. Instead, all DEUTZ employees in Cologne got to catch a glimpse at the tasks of the service segment. Ten experts from the service team were available for discussion and answering the interested visitors’ questions.

Participants of the Service Day expanded their knowledge about the basic pillars of the service network: the web-based e-learning system, the extensive course catalogues of the training centre, the daily updated SERPIC parts database and the service logistics department, which ensures fast availability of more than 40,000 spare parts. Another focal point of the event was the spare parts segment itself. Visitors had an opportunity to find out about service parts, virtual kits and operating materials. Another well-received part of the event revolved around the Xchange programme: an informative exhibit elaborated on the extensive product portfolio and the warranty and dispatch processes. In addition, the Service Department punctually introduced the new web shop, which offers spare parts, engine registration forms in forklifts, for instance, must be able to handle a runtime of more than 4,000 hours per year and a total of 20,000 operational hours. Economic efficiency and high availability are the fundamental requirements for drive systems, making these factors the main priority in the development of special industrial engines.

On 27 and 28 April, the world’s engine development specialists met once again at the 38th International Vienna Motor Symposium. Renowned researchers and industrial experts presented new engine concepts, fuel cells, fuels, hybrid technologies, emissions control systems and much more at the Hofburg Conference Centre; a trade exhibition with more than 50 exhibitors completed the symposium.

Dr Frank Hilger, Chairman of the Board of Management at DEUTZ, and Dr Markus Schwaderlapp represented DEUTZ at the world’s leading industry event in Austria, where they enjoyed an intensive exchange with the automotive industry and its suppliers. DEUTZ has been focusing on discovering new technologies in this field, many of whose developments can easily be transferred to the off-highway sector.
“Our customers are at the centre of our attention”

Customer satisfaction is a top priority for DEUTZ. And there’s no doubt about it; quality can make or break a partnership. DEUTZ invests in the quality of its products and processes. After successfully implementing its zero-defect strategy, it is now completing its comprehensive quality assurance programme with DEEP, the DEUTZ Excellence Engineering Programme. In their interview with DEUTZWorld, DEUTZ CEO Dr Frank Hiller and Fred Kaminski, Director of Central Quality Management since 1 May 2017, explained what exactly DEEP is and whom it targets.

Dr Hiller: In our first interview earlier this year, you told us that stable, long-term partnerships with the customers are particularly important to you. How does DEUTZ ensure lasting customer satisfaction?

Kaminski: To put it briefly: we invest in quality. We know that we need excellent product quality to offer our customers secure, future-oriented technology and remain innovative and competitive in the long term. To achieve this, we must always stay abreast of the times. The advancing digitalisation has a huge impact, for instance. It leads to shorter and shorter technology cycles, which we need to take into account in our product development. At the same time, customer requirements do not stand still. Our customers are constantly connected to their digital channels; they have access to any information at any time. In our digital age, customers want speed, constant availability and technological expertise at the state of the art. We are training our dealers, service staff and, of course, our employees to meet these requirements always and everywhere.

How are these company-internal training courses structured?

Dr Hiller: DEUTZ recently devoted a great deal of time and energy to its zero-defects strategy, which it has implemented with great success. Many processes have already been optimised as a result. As a next step, we are going to implement our new quality measure called DEEP (DEUTZ Excellence Engineering Programme) as a complement to the zero-defects strategy. It is based on a pyramid structure: while our zero-defects strategy was targeted at our employees, DEEP is a top-down approach, which actively involved our top management to make our quality programme fully comprehensive. This pyramid structure unites two interest groups to consolidate two approaches into one overarching strategy. This gives every single DEUTZ member an opportunity to contribute to our quality management. After all, every member of our company is responsible for the quality of our products, regardless of their function and hierarchical position.

Kaminski: Quality is an extremely complex topic, and we need a systematic approach to support our quality assurance programme – a guiding principle, so to speak. The Six Sigma method provides this systematic support, for instance. In the future, we want all department heads to undergo training to become so-called Six Sigma Black Belts and take on improvement projects from other departments in the company. This active involvement with other departments will give them insights into why processes may be delayed or how problems occur and, in turn, convey a deeper understanding of the processes and synergies within the company.

Will DEUTZ restructure its quality management as part of these measures?

Kaminski: Yes, centralising quality will be an important aspect of the new measure. It will support our quality programme by raising the question: am I currently doing everything in my power to create a perfect product and achieve maximal customer satisfaction? You need to be able to answer this question with an honest and resounding “yes” to meet your own quality standards and those of the company. After all, quality starts in the mind.

Dr Hiller: Definitely. The skills of our employees are our greatest asset. Every company must always ask itself: have I accumulated enough expertise to satisfy the needs of my clients? This is why we are going to such great lengths to involve all employees in our quality assurance measures. We need to keep our expertise within the company to secure our practical knowledge for the long term. And this is only possible with a cooperative company culture: we need to share our knowledge and experiences with each other actively in order to avoid inefficiencies and create logical, sequential processes. In other words: rather than simply going up to the next recipient and assuming everything will go according to plan, you need to think in terms of a process chain. This will allow us to act proactively rather than reactively and maintain enjoyment and appreciation of our own work. This ultimately benefits our customers in the form of high-quality products.

Six Sigma

Six Sigma (Si) is a systematic approach to process and product improvement that delivers a measurable result by way of defined steps and the stringent use of quality management methods. Its key element is the documentation, measurement, analysis, improvement and monitoring of business processes using statistics. In addition, it frequently uses the so-called DMAC method – Define, Measure, Analyse, Improve, Control. Its goals are based on quality problems, relevant financial parameters of the company, and customer requirements.

Which measures does DEEP cover within the DEUTZ quality assurance programme?

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A new life
for a former DEUTZ site

Since the beginning of its company history, DEUTZ AG has been assembling engines and manufacturing parts on Deutz-Mülheimer-Straße in Cologne, on the right side of the river Rhine. Even though the factory is located in the district of Mülheim, DEUTZ members speak fondly of the “Deutz site”, the namesake of the company. On 3 May 2017, DEUTZ AG announced the sale of its property in Cologne-Deutz, which measures approximately 160,000 square metres, to the property project development firm GERCHGROUP AG in Düsseldorf.

DEUTZ AG already decided to move the entirety of its premises from Cologne-Deutz to other locations – especially its headquarters in Cologne-Porz – in 2014. The new shaft centre at the main site in Porz was built to accommodate this project. Earlier this year, the relocation and clearance of the Cologne-Deutz site was finally completed. It marks the end of an era for DEUTZ.

DEUTZ World has interviewed Dr Margarete Haase, Member of the Board at DEUTZ, and Mr Christian Krupp, Director of Finances, Investor and Public Relations and responsible for the utilisation of the premises in Cologne-Deutz, why the company decided to leave its home district.

DEUTZ World: What is going to happen to the premises, and what has been done since the company decided to relocate?

Dr Haase: Cologne has grown over the years. Today, our former premises in Deutz are located in a central location surrounded by residential buildings and brownfields. The problems are obvious: consider heavy-duty traffic in densely populated residential areas, especially at night. On top of that, our infrastructure in Deutz was outdated and our productivity per square metre was poor. The existing buildings had high maintenance costs, which increased constantly. Our relocation allowed us to sell the former factory premises in Cologne-Deutz at attractive conditions. By making former industrial premises available for other purposes, we are contributing to the development of the City of Cologne, especially in terms of new housing in the metropolitan area – which is directly needed.

DEUTZ World: What are the concrete plans for the plot of land?

Krupp: The City of Cologne has been growing steadily over the course of the past years, and it will continue to grow. Last year, Cologne had approximately 1,082,000 inhabitants; another sixty thousand are expected by 2025. Converting our previous industrial premises into an urban district with a lot of residential space is an obvious step. We sought dialogue with the city administration early on. The interests of the city – i.e. the creation of residential spaces and, in particular, affordable residential spaces – and our own interest in the most efficient utilisation of the property are extremely compatible. In 2013/14, the City of Cologne carried out an exploratory workshop for the south of Mülheim, involving the general public in the planning discussion. The ideas and considerations from this workshop constituted the basis for a formal development planning process, which we initiated in 2015. While the process is quite advanced at this stage, it is not yet completed. A team of JLL consultants and evaluators has been providing us with professional support.

DEUTZ World: Why have you already sold the premises in Cologne-Deutz at this point in time – and why to GERCHGROUP?

Dr Haase: We originally planned to conclude the development planning procedure first and then sell the property. But it turned out that we can already take advantage of the full value potential of the property, which it will achieve after conclusion of the planning procedure. This is possible thanks to a favourable contract with the buyers. GERCHGROUP was awarded the contract because it made the highest offer out of all bidding parties whom we considered adequately competent to manage a property development process of the scale involved here, and with whom we are keen to work together in the further process.

DEUTZ World: What do you have to say to those who claim that we essentially sold our roots by leaving the Deutz location?

Krupp: As I have already mentioned, unused industrial areas and brownfields are being returned to the general public and transformed into attractive residential spaces. In the near future, the citizens of Cologne will be living and taking walks in the area; their children will be playing there. The urban planning concept is very convincing: the identity of the area will be preserved, e.g. by maintaining some of the old buildings and halls. A memorial to the roots of engine manufacturing could be erected on the site, too. During our discussions with the City of Cologne, we have agreed that the site of the old casting plant – a historically even more significant area owned by a local company – will be named “Otto-Langen-Quartier” and that a half in this area, which will be particularly prominent thanks to its free-standing structure and location directly adjacent to the Rhine, will no longer be named after Möhring, an architect from Berlin. Instead, it will be the “Otto-Halle”. It has also been suggested that the park on our site will be named “Erdtenderpark” (Inventors Park) and decorated with memorial stones to celebrate the personalities who worked in this area during the foundation of Deutz and who essentially initiated the field of engine construction. The support of Mr Helmut Müllér and his colleagues in the company history department has been extremely helpful.

The identity of the area, characterised by its brick buildings and large halls, will be maintained. This effort will include the preservation of certain larger halls, which are listed buildings. Plans for the site involve dense residential areas with quiet courtyards, similar to those in Berlin. The concept has been met with general approval so far; it is scheduled to be implemented within a few years.

DEUTZ World: Will a considerable cash injection in the three-digit million Euro range from the sale of the site.

How do you intend to use this money?

Dr Haase: That is correct – we anticipate an inflow of approximately 125 million Euro for the sale in the present year and, depending on the conclusion of the current development planning procedure, an additional, final purchase price instalment, which will involve a variable sum that may reach the medium two-digit million Euro range in the best case. This income from the property sale will give us new opportunities to invest in our growth and the strengthening of our core business. We have already announced that we will increase our investment in our dealer and service network and acquire individual dealers, for instance. Over the course of the year, we will provide more concrete statements about our use of the funds.

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Krupp: According to current plans, 60–70% of our former factory site in Deutz will be converted to apartments. The remaining space will be distributed among non-disruptive commercial establishments, a primary school, a day-care centre and other purposes. Green paths to the Rhine will be provided for pedestrians and cyclists. There will also be a sizable park.
The face of pricing

He is one of the most high-profile German economists: Professor doctor honors cause multiple Hermann Simon. The founder of the strategy consultancy firm Simon-Kucher & Partners has also made a name for himself as a best-selling author and renowned expert of international economics. In May, the pricing expert visited DEUTZ AG in Cologne to talk about his personal relation to the engine manufacturer.

Sooner after we start talking to Professor Hermann Simon, we notice that the renowned economist is a multi-faceted person. He grew up in a tiny village of 600 in the Eifel region, where he still inhabits the 8.5 hectares of farm space that his parents used to run in the past. Having coined the term of ‘price management’, he is considered a leading figure in the field of pricing. Of course, the German media paid due tribute to this calibrated economist on the occasion of his 70th birthday in February. An article in the Handelsblatt newspaper showed the likable Eifel native in a very particular vehicle: a DEUTZ tractor.

Why did he choose this picture? “To me, this tractor is hugely symbolic for my youth. I was only 10 when my father bought his D15. The DEUTZ tractor, built in 1962, was the first tractor on my parents’ farm. Until that point in time, these innovative technologies had not yet arrived in our region and we still used horses to work the fields. Our tractor seemed to us like a harbinger of the technological innovation that was about to sweep the nation.”

At the time, he was unaware that this technical innovation would ultimately reunite him with DEUTZ many years later. But the company has been by his side all his life: “From my first teenage encounters with the new technology up to my current job as a management consultant, I have always had a close connection with DEUTZ,” Simon recounts. Not only is he work-ed with DEUTZ – the company that has always symbolised technological progress to him – in his capacity as a consultant, he is also a passionate fan of this engine manufacturer and its 150-year history; as he revealed during his conversation with Dr Margarete Haase, Member of the Board at DEUTZ. His fascination for the rapid development of engine technology is quite tangible: “When the first tractors arrived in our corner of the world, we already spoke of a huge leap of technology. But look where we are today! Self-driving vehicles have become a common topic of conversation. Autonomous driving is no longer science fiction; it has become reality.”

Simon also pointed out that German car manufacturers and suppliers have been granted the largest number of patents in the field of autonomous driving since 2010. This proves that the notion of the ‘hidden champion’, also coined by Simon, applies to many German manufacturers nowadays: relatively low-profile companies that are market leaders in niche markets and characterised by a high degree of specialisation and customer proximity.

“Consumer behaviour is a subconscious process,” Simon explains. “In my field, we use the term ‘magic middle’ to describe an interesting phenomenon. Imagine you are in a hardware store, trying to buy an item for your garden. There is a cheap product, a medium-priced product and an expensive product. Your subconscious will tell you this: the cheap product may be of poor quality, and the most expensive product is probably overpriced. So you choose the middle product, expecting to get good value for money.”

Price plays an important role as a quality indicator. Customers want high-quality products at an appropriate price. In this case, “appropriate” means that the value of the product, according to the benefit perceived by the customer, the so-called “value to customer”. Inter-es-tingly, the so-called “hidden champions” tend to price their products approximately 10-15% higher than the industry average. Which factors, then, convince customers to pay more than the average price? Of course, Simon – an expert in behavioural economics – knows the answer. “Quality is the primary criterion, of course. As a customer, I am prepared to pay an appropriate price for an excellent product,” DEUTZ also attaches great importance to this factor: ultimately, what really matters is the outstanding quality of the product that the customer receives.

Industry 4.0 – risk or opportunity?

To Simon, customer proximity also plays an important role. “The greatest strength of the hidden champions is doubtlessly their customer-oriented business approach. This includes local availability of maintenance services, on the one hand, and mental availability, on the other – the ability to understand and adapt to the needs of the customers. Another key word is “quality”. The ever-expanding digitalisation, accelerated by increasingly tight emission legislation, continuously raises new challenges for engine manufacturers. Technology cycles shorten and the digital engine is the new concept of the future. Industry 4.0 is on everyone’s lips. Does our economic expert consider this an opportunity or a risk? “It is a combination of both. Of course, not everything can be digitalised. But whatever can be digitalised will be digitalised. This will doubtlessly bring new qualifications into focus, which will differ from those valued in the traditional industry,” Simon explains. Nonetheless, he is looking towards the future of the German industry with optimism: “Its specialisation and complexity can be a clear advantage. “The industry in Germany primarily benefits from the niche markets, which are less interesting to the major world players. While the Americans are the unparalleled leaders in the world of digital B2C business, German small and medium-sized enterprises focus largely on B2B. Processes are more in-depth and more complex here; the field requires more extensive knowledge and expertise.”

To Simon, expertise does not equal a vast portfolio of diverse competences. Instead, it requires a succinct focus on the core business. “I have known DEUTZ for many decades, and the company used to be much more diversified in that past, e.g. in the 1970s. By focusing on its core business – the production of diesel engines –, DEUTZ has successfully honed in on a decisive segment and expanded it consider-ably. This is the strength of the hidden champions.”

Regardless of individual success, the expert emphatically recommends one strategy: continuous improvement. “It is important to aim for more at all times. Stagnation in economics and development is never advisable. If you keep these goals in mind, you are on track to becoming a champion.”

IN DIALOGUE

“DEUTZ is a major player in the international market environment. But the ‘hidden champion’ aspect applies nonetheless: as a supplier, DEUTZ does tend to hide its product competence ‘under the hood’ instead of occupying a cognitively prominent brand position. Its position as one of the world’s largest independent manufacturers of diesel and gas engines is an important characteristic. This independence is no longer commonplace, and it constitutes a decisive success factor. The DEUTZ service-segment is an additional strong point: regardless of the industry, service is crucial nowadays, and good service can have a huge influence on consumer behaviour.”

“When it comes to consumer behaviour, Simon knows what he is talking about: he is the unparalleled expert in the field of pricing. His consultancy firm, Simon-Kucher & Partners, is the global market leader in the field of price consultancy, and Simon has personally conducted intense research into consumer behaviour. In this capacity, his company has also provided consulting services for DEUTZ in the past.

“Consumer behaviour is a subconscious process,” Simon explains. “In my field, we use the term ‘magic middle’ to describe an interesting phenomenon. Imagine you are in a hardware store, trying to buy an item for your garden. There is a cheap product, a medium-priced product and an expensive product. Your subconscious will tell you this: the cheap product may be of poor quality, and the most expensive product is probably overpriced. So you choose the middle product, expecting to get good value for money.”

Price plays an important role as a quality indicator. Customers want high-quality products at an appropriate price. In this case, “appropriate” means that the value of the product, according to the benefit perceived by the customer, the so-called “value to customer”. Inter-es-tingly, the so-called “hidden champions” tend to price their products approximately 10-15% higher than the industry average. Which factors, then, convince customers to pay more than the average price? Of course, Simon – an expert in behavioural economics – knows the answer. “Quality is the primary criterion, of course. As a customer, I am prepared to pay an appropriate price for an excellent product,” DEUTZ also attaches great importance to this factor: ultimately, what really matters is the outstanding quality of the product that the customer receives.

Industry 4.0 – risk or opportunity?

To Simon, customer proximity also plays an important role. “The greatest strength of the hidden champions is doubtlessly their customer-oriented business approach. This includes local availability of maintenance services, on the one hand, and mental availability, on the other – the ability to understand and adapt to the needs of the customers. Another key word is “quality”. The ever-expanding digitalisation, accelerated by increasingly tight emission legislation, continuously raises new challenges for engine manufacturers. Technology cycles shorten and the digital engine is the new concept of the future. Industry 4.0 is on everyone’s lips. Does our economic expert consider this an opportunity or a risk? “It is a combination of both. Of course, not everything can be digitalised. But whatever can be digitalised will be digitalised. This will doubtlessly bring new qualifications into focus, which will differ from those valued in the traditional industry,” Simon explains. Nonetheless, he is looking towards the future of the German industry with optimism: “Its specialisation and complexity can be a clear advantage. “The industry in Germany primarily benefits from the niche markets, which are less interesting to the major world players. While the Americans are the unparalleled leaders in the world of digital B2C business, German small and medium-sized enterprises focus largely on B2B. Processes are more in-depth and more complex here; the field requires more extensive knowledge and expertise.”

To Simon, expertise does not equal a vast portfolio of diverse competences. Instead, it requires a succinct focus on the core business. “I have known DEUTZ for many decades, and the company used to be much more diversified in that past, e.g. in the 1970s. By focusing on its core business – the production of diesel engines –, DEUTZ has successfully honed in on a decisive segment and expanded it consider-ably. This is the strength of the hidden champions.”

Regardless of individual success, the expert emphatically recommends one strategy: continuous improvement. “It is important to aim for more at all times. Stagnation in economics and development is never advisable. If you keep these goals in mind, you are on track to becoming a champion.”

IN DIALOGUE

“The greatest strength of the hidden champions is doubtlessly their customer-oriented business approach.”
A land between success and emissions

China is a land of extremes. The home of countless modern megacities is characterised by giant infrastructural programmes and investments. Within only 30 years, China – which looks back on a proud history of 5 millennia of civilisation – has developed into a modern economic power. Over the past years, German companies have conducted very successful business in China. One of these companies is DEUTZ AG, for whom China remains the largest growth market in Asia.

DEUTZ has been represented in China for many years. In 2000, the company established its first joint venture in the Middle Kingdom; in 2017, this was followed by the joint venture DEUTZ (Dalian) Engine Co., Ltd., which the company maintains in cooperation with the First Automotive Works Group (FAW), one of China’s leading car manufacturers, in Dalian (China). It produces 3 to 8-litre DEUTZ diesel engines mainly for the Chinese market.

Expanded product range for DDE

As of the 2019 fiscal year, and with the introduction of the China IV emission legislation, the DEUTZ Dalian product range will be expanded to include new, more advanced DEUTZ licence engines. DEUTZ recently presented its technological innovations at Bauma China, one of the largest trade fairs for construction machines in Asia. At the event, DEUTZ also showcased its small, four-cylinder TCD 2.9 litre engine for the first time in its portfolio. Previously, the DDE product portfolio was limited to 4-8 litre engines. The TCD 2.9 is an excellent addition that effectively completes our portfolio in this capacity range and allows us to cover the requirements of our local customers in this performance class. We have already acquired the first deals with major clients, thanks to the licence for the 2.9, which is improving the utilisation rate at DDE considerably.

DEUTZWorld: How do you intend to ensure high quality standards when the new engine is introduced?

Dr André Philipp: For the current emission stages, we want DDE to rely primarily on lessons learned at DEUTZ, which involves an exchange of past experiences that will enable DDE to achieve a successful series launch with the help of DEUTZ expertise. This will allow us to start at a whole new level of quality. In order to guarantee the smoothest possible production start for the TCD 2.9, we have implemented a new mode of operation, for instance. Since last year, we are organising a regular steering committee meeting to discuss the latest relevant topics. Our so-called task force teams consist of representatives from DEUTZ and DDE who regularly discuss the latest issues and problems in periodic team meetings and develop solutions together. This new workflow enables us to find these solutions in an extremely short time.

DEUTZWorld: The new China IV emission legislation, which will come into force in 2019, is eagerly anticipated in the country. How is DDE preparing for the introduction of the new emissions standard?

Dr André Philipp: DDE will rely on extremely close cooperation with DEUTZ in its preparation for the new emission stage: besides the TCD 2.9 licencing and the further advancement of the TCD 2012 and TCD 2013, the company has also commissioned DEUTZ software. The China IV products are especially using this DEUTZ software to control EAT structures. Rather than choosing an external solution, DDE continues to follow DEUTZ by using its software.

DEUTZWorld: Which challenges does the new emission legislation entail for customers?

Dr André Philipp: It is quite apparent that the Chinese government is serious about compliance with the emission legislation, but consumers seem to be completely lost in the jungle of technological innovations. They struggle to understand many aspects of the SCR systems, for instance. Frequently, customers fail to refill the SCR tank when it is empty. What seems in comprehensible at first is easily explained in terms of financial considerations and problems of understanding. Some customers do not consider the SCR system to be a necessary element of exhaust gas after-treatment systems, as the reduction of emissions is only a secondary concern to end users. We are currently working on striking a balance between such end users who want to use an uncomplicated vehicle and suppliers who deliver in accordance with specifications. To this end, we maintain close contact with our customers and provide them with all necessary technical information and personal support.

DEUTZWorld: And what can you do to influence customer awareness?

Dr André Philipp: Of course, we try to convince our customers with data, facts and meaningful analyses. During our dealer training courses and our direct contact with the customers, we explicitly point out that this understanding needs to be conveyed to the end users, too. But I want to emphasise that this is not the rule. Many consumers are very aware of the need to reduce emissions, and they are happy to accept our dealers’ recommendations.
Emissions legislation for mobile machinery in 2020

DEUTZ AG’s expectations for future global emissions legislation

The current China III emissions standard is based on the EU Stage IIIA. The new China IV emission legislation, which will come into force in 2019, is equivalent to EU Stage IIIIB. Additional technical requirements are currently being discussed and likely to arise.
Royal award for DEUTZ Spain

DEUTZ Spain received a high honour in May: the Spanish King Felipe VI conferred an honorary medal to the DEUTZ subsidiary.

In the occasion of the 100th anniversary of the German Chamber of Commerce (AHK) on 25 May, the Spanish King Felipe VI awarded honorary medals to companies that have been active in Spain for more than a century. During the award ceremony in Madrid, Felipe VI also presented this medal to the Technical Director and Representative of the Managing Board of DEUTZ Spain, Fernando Angulo. The subsidiary of DEUTZ AG has been incorporated in Spain since the late 19th century, and it has become an important example of the significance of the German industry to the country. More than 700,000 people are currently directly or indirectly employed in more than 1,110 branches of German companies in Spain.

The award ceremony in the Spanish capital was attended by nearly 400 representatives from the Spanish-German industries and institutions, including the Spanish Minister for Energy, Tourism and Digital Agenda, Álvaro Nadal, the Parliamentarian State Secretary of the Federal Ministry for Economics and Energy, Iris Gleicke, the German Ambassador to Spain, Peter Tempel, the President of the German Chambers of Industry and Commerce, Eric Schweitzer, the President of the Spanish Chamber of Commerce, José Luís Bonet, and the President of the German Chamber of Foreign Trade for Spain, Rosa García.

DEUTZ Spain, S.A.U. is a fully owned subsidiary of DEUTZ AG that manufactures key components for diesel engines (cylinder heads, piston rods, gears, bearing caps) at its factory in Zafra. The DEUTZ Spain sales branch in San Fernando de Henares (Madrid) is responsible for the engines, spare parts and customer service of DEUTZ AG on the Iberian peninsula.

New DEUTZ service centre in Barcelona

DEUTZ AG has acquired the business activities of the Spanish DEUTZ dealer Tallers Soler with effect from 1 July 2017. It will continue the operations of the acquired company as a service centre serving the surrounding region of Barcelona.

Founded by Juli Soler in 1973, Tallers Soler has been a close contractual partner of DEUTZ for more than 40 years. It is one of the main suppliers of DEUTZ original spare parts and DEUTZ Xchange engines in Spain. As a renowned dealer of DEUTZ engines in Catalonia, Tallers Soler soon became the benchmark for careful, value-preserving repairs of DEUTZ engines used, for instance, in mine or agricultural machinery. The company additionally specialised in machines fitted with DEUTZ engines. Most recently, the extensive and diverse customer portfolio of Tallers Soler achieved an annual turnover of approximately EUR 1 million. “I was only 15 when I repaired my first DEUTZ tractor. Since then, 67 years have passed – 67 years during which I worked intensively with DEUTZ. I am very proud of that. I am delighted to know that our work is being continued by DEUTZ themselves,” Juli Soler explains.

The new Service Centre in Barcelona will strengthen the DEUTZ sales and service network in Spain, where the company is already represented with a sales and service centre in Madrid and 21 contractual dealers. “We are pleased to expand our presence in Spain with our new DEUTZ Service Centre in Barcelona, which allows us to work in even closer proximity to our customers,” Georg Diderich, Senior Vice President, Sales & Service EMEA, DEUTZ AG, explains. The DEUTZ service segment provides its customers with comprehensive support for all DEUTZ products throughout their entire life cycle. 800 DEUTZ service partners are available to help customers in 130 countries around the world. 12 logistics centres in Germany, the USA, Africa and Asia guarantee the worldwide supply of more than 40,000 original spare parts from stock.

Open day at the DEUTZ Service Centre in St Louis

In 23 June 2017, the DEUTZ Service Centre in St Louis (the USA) opened an open day for DEUTZ customers, dealers and OEM partners.

“The event was a great success.” Ben Sanders, Branch Manager of the DEUTZ Service Centre in St Louis, affirmed. “The open day gave our customers and partners an opportunity to experience our Service Centre live and meet our staff in person.” The DEUTZ Service Centre in St Louis is one of the second of its kind in the United States. It opened in January 2017 in order to provide comprehensive customer service for all DEUTZ product series. The St Louis Service Centre currently caters to customers in the entire Midwest, including eastern Missouri, Illinois and northern Indiana.

“Our local DEUTZ Service Centre has been met with an excellent reception since its opening, and we have received very positive customer feedback,” Sanders comments. “As more and more customers become aware of our existence and the availability of our perfectly trained staff, our service and spare parts business is growing steadily.”

The DEUTZ Service Centres provide regular maintenance and emergency services for DEUTZ engines at their own facilities or directly at the customers’ locations, using mobile technicians and trucks. In addition, the DEUTZ Service Centres also sell original DEUTZ spare parts and liquids to customers, retailers and trained OEM traders working with DEUTZ equipment. The service technicians provide a wide range of maintenance services, ranging from simple oil and filter changes to complex diagnostics and full engine replacements.

“We are convinced that branches in central locations give DEUTZ customers direct, regional support,” Sanders comments. “Our Service Centre in St Louis helps us guarantee excellent service and support for the region and support the development of important customer relationships.”

Smooth operations –
the DEUTZ TCD 2.2 three-cylinder engine

DEUTZ is expanding its product portfolio to meet customer demands for powerful, compact engines. The new TCD 2.2 three-cylinder engine will be released in 2019. Its unfavourable vibration level, which is inherent to the concept, has been reduced. The engine achieves the same running smoothness as comparable four-cylinder models.

DEUTZ already introduced the TCD 2.2 at Bauma 2016. The new three-cylinder variety of the successful TCD 2.9 four-cylinder engine deliberately expands the lower range of the performance scale. At 16 to 56 kW, it is especially suitable for the lower load range in the field of material handling and compact construction machinery. Thanks to the engine platform shared by the two models, customers can take advantage of extensive synergies for the integration of the machines, e.g. in terms of their connectors and the availability of spare parts. As of 2019, the new engines will be launched on the market for EU Stage V. In addition, DEUTZ will launch two liquid-gas versions (also referred to as LPG or propellant) of the TCD 2.2 and TCD 2.9. Named G 2.2 and G 2.9, respectively, the engines are also based on the same platform.

But four-stroke three-cylinder engines are controversial among engine specialists: especially for a self-igniting diesel, the machine is largely considered to be rather rough. Compared to four-cylinder engines, three-cylinder concepts certainly raise a few challenges for developers. Dr Klaus Reitz-Full, a developer of basic engines in the field of vibrations and noise at DEUTZ AG, explains: “Due to the physical conditions, three-cylinder models have a relatively complex motion profile during operation. The engine leans, swerves or rotates in almost any direction and on any axis, and this movement can be transferred to the whole machine in the form of vibration.

Vibration level of a four-cylinder engine

DEUTZ has successfully mastered the “three-cylinder challenge” and brought the vibration level of the new TCD 2.2 down to the same level as that of a TCD 2.9 four-cylinder engine.

The first step was to prevent vibration from the outset. In addition, DEUTZ has adapted the crankshaft of the TCD 2.2. A gap in the flywheel and an additional counterweight on the frontal crankshaft provide precisely calculated balancing forces that ensure the right balancing rate for any application.

As a next step, the installation of the engine was reworked. While regular engines are installed or mounted on four points, the DEUTZ engineers chose a three-point setup for the TCD 2.2. In simplified terms, it works on the same principle as a three-legged table. Its mass is always distributed across the three points in a statistically determinate manner: it cannot wobble. Two points are located on the rear of the flywheel, the third on the front, underneath the belt drive. By calculating the exact position, the vibration behaviour of the engine has been improved considerably.

Another supporting factor of these proactive measures was the optimisation of the engine mounts in order to mute the remaining vibration as much as possible and isolate them from the application. While regular rubber bearings are used in most engines, the DEUTZ engineers chose so-called hydromounts. “For the engine mount, we are using a combination of rubber and hydraulic bearings. These hydromounts have additional shock absorption capacities on account of a special liquid used. They significantly reduce vibration introduced by mounting the machine in the frame of the customer’s machine. We have proven the isolating effect with various measurements. The vibrations were measured along the longitudinal, lateral and vertical axis of the engine; the measured values of the TCD 2.2 are at the same level as those of the TCD 2.9 four-cylinder model,” Dr Reitz-Full explains.

An additional adjustment of the flywheel and counterweight can reduce vibration in a specific direction even further. If the customer requests, swerving around the vertical axis can be increased in exchange for a lowered pitch motion. An opposite setup or a balanced 50-50 configuration are also possible. The vibrations running into the machine can be adjusted individually to achieve the best possible result, depending on the mounting situation of the engine.

“A first practical trials in a mounted state have shown that the TCD 2.2 three-cylinder can subjectively reach the same vibration level as its big, four-cylinder brother, the TCD 2.9. Thanks to precise optimisations, we can offer a highly compact, high-performance three-cylinder engine that will delight our customers with its smoothness,” Dr Reitz-Full summarises.
The new DEUTZ Service Portal

Limitless access to information and services on the internet has long become something between a matter of course and a basic requirement for most people. DEUTZ caters to this need: the new DEUTZ Service Portal offers dealers, garages and users of DEUTZ engines a wide range of online services in one convenient platform.

Globally present, locally available

The DEUTZ Service Portal takes the DEUTZ service network online: customers from all over the world have the option of contacting their local service partner online. The platform system combines the advantages of the worldwide web – unlimited access around the clock – with the strengths of competent on-site service: support, service and delivery remain the responsibility of the customer’s local DEUTZ partner. This minimises delivery times and guarantees the best possible support.

One portal for everything

The new Service Portal is more than just a web shop: it offers customers a wide range of functions and contents related to DEUTZ engines. With one central login, customers receive access to spare parts, engine documents, product information and more.

Experience the new DEUTZ Service at www.deutz-serviceportal.com!
Breathing new life into old machines

Professional refurbishment and components are a speedy, economically viable and environmentally-friendly alternative to purchasing a new product. DEUTZ Xchange engines and parts guarantee optimal functionality.


Xchange products for your engine

Optimal filtration of substances such as lubricant, fuel and combustion air is essential for sustaining the performance and functionality of an engine for the long term. DEUTZ now offers air filter elements for new filter types as part of its equipment service.

Reliable filtration for your engine

Compared to new engines, DEUTZ air filters are highly effective and reliable at filtering this combustion air, thus preventing dust from entering the engine compartment and increasing wear, fuel consumption and exhaust emissions. DEUTZ original parts offer the highest possible grade of filtration and reliably filter even minute dust particles in the micronetre range; they are equipped with high-grade filter paper that is waterproof and highly tear-resistant. Their especially long service life prevents tears that could otherwise allow unfiltered air to enter the engine. Thanks to optimum pleat geometry of the filters, they have an extraordinarily large filter area. With such a large amount of paper in a small space, the filters absorb great amounts of dirt and achieve an optimal filtration effect throughout the entire change interval. The special embossing and scoring of the paper ensures that the pleats are at an optimal distance to each other, allowing the filter surface to absorb dirt for the duration of the entire operating life of the filter.

Did you know? DEUTZ also offers short blocks for agricultural vehicles with full manufacturer’s warranty. Shipments include: crankcase (cooling nozzles, tappet rollers), crankshaft, connecting rod, main and conrod bearings, piston assies, camshaft, rear cover, cylinder head gasket and Gasket set.

Short blocks are available for some models from the following (and other) manufacturers*: AGCO/Fendt, Artec, Belarus/MTZ, Biala, Case, CMC, DEUTZ-Fahr, Deutz Fahr, Evrard, EXEL, Gregoire, Lauphe, M&M, Merlo, Precicultura, Same, Terion und Zetor.

* n for EU Stage II (US EPA COM2), EU Stage IIIa (US EPA Tier3), EU Stage IIIb (US EPA Tier4i)

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