THE LOGIC OF INNOVATION
How companies become viable by changing the way they think

WITHOUT FAIL ...
Valve actuators from HOERBIGER score with fail-safe function

ABSOLUTELY LEAKPROOF
HOERBIGER sets standards with reciprocating compressors

CUSTOMER MAGAZINE | AUGUST 2015

HOERBIGER @ MOTION
The year 2014 was another good year for the HOERBIGER Group. We were pleased to report sales growth of just over 3.4 percent and an improvement in net operating income. The oil price trend, the continued political instability in Eastern Europe, and rising foreign exchange risks in South America, most notably in Argentina, Venezuela, and Brazil, presented our markets, and consequently our Group, with new challenges in 2014. This is all the more reason to express our gratitude to our customers for the confidence they have placed in the innovative strength, expertise, and performance capability of the HOERBIGER brand.

The favorable annual financial statement is also rewarding for our 7,004 employees worldwide because it is they who, through their engagement and performance, support and shape the growth of the HOERBIGER Group.

As a technology company, HOERBIGER will continue to be driven by innovations – with products and services that offer unique selling propositions in keeping with our customers’ requirements and needs.

LADIES AND GENTLEMEN,

AS A TECHNOLOGY COMPANY, HOERBIGER WILL CONTINUE TO BE DRIVEN BY INNOVATIONS – WITH PRODUCTS AND SERVICES THAT OFFER UNIQUE SELLING PROPOSITIONS IN KEEPING WITH OUR CUSTOMERS’ REQUIREMENTS AND NEEDS.”

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HYDRAULIC SYSTEMS BUSINESS DIVISION: INNOVATIONS FOR EQUIPMENT MANUFACTURERS AND THE AUTOMOBILE INDUSTRY

As of June 1, 2015, HOERBIGER has pooled all hydraulics activities into one Business Division. The new Hydraulic Systems Business Division includes the Compact Motion Technology Business Segment, which previously formed part of the Strategic Business Unit Automation Technology, as well as the Roof Hydraulics and Loading Comfort Segments from the Automotive Comfort Systems Business Division.

The example of equipment manufacturer Fratelli Vimercati s.n.c. from Sovico, Italy, demonstrates the performance capability of the new Business Division. The owner-operated company is equipping its latest generation of energy-saving press brakes with electrohydraulic HOERBIGER wPAX™ actuators. In the future, we will apply the know-how we have acquired with the development of our new actuator generation for press brakes to an even broader range of applications in the mechanical engineering field.

Valve Automation, the second Business Segment of the Strategic Business Unit Automation Technology, has been assigned to the Strategic Business Unit Compression Technology. This second important change in the HOERBIGER organizational structure will bolster our portfolio for highly efficient safety solutions for the oil, gas, and process industries. With the development of electrohydraulic valve actuators and innovative positioner modules, the team of the Valve Automation Segment has been very dedicated in recent years in creating the technological template for modern, powerful, and safe industrial valves. Like French pipeline operator Trapil, a growing number of equipment operators are opting in favor of a HOERBIGER TriVAX™ actuator when high control performance, and most notably reliability and integrated safety functions, are key.

In a third report, we introduce to you the innovative HOERBIGER XpeSEAL sealing system, which is in use at Swedish energy firm Öresundskraft AB. In the feature article in this issue of HOERBIGER@MOTION, Professor Gunther Herr examines the logic of innovation. I am sure you’ll find his thought-provoking ideas as inspiring as I have.

I would be delighted if this issue again brought the identity and character of HOERBIGER closer to you. Above all, I would like to take this opportunity to thank you for continually taking an interest in our topics.

Dr. Martin Komischke
CEO and Chairman of the Executive Board HOERBIGER Holding AG
In mid-July, company employees all over the world started receiving the new HOERBIGER Yearbook.

By developing XperSEAL, HOERBIGER created a sealing system that entirely prevents leakage loss during the operation of reciprocating compressors.

Valve actuators from HOERBIGER score with fail-safe function.

In more than 40 years of company history, Vimercati has acquired a strong position on the international market for sheet metal working machines.

As an innovation and technology leader, HOERBIGER sets standards. An example is the XperSEAL system.

HOERBIGER presented five innovations at ACHEMA 2015.

The world’s most leakproof filling station

Without fail ...

Efficient – reliable – safe

From Lombardy into the world

Absolutely leakproof

The world’s most leakproof filling station

The wild pony is all grown up

Current vehicles featuring HOERBIGER drive technology

Innovation is a key issue for HOERBIGER – in every respect.

As part of the HOERBIGER 2015 Production Conference in Dresden, Dr. Gunther Herr, Junior Professor in the Executive MBA Program of Steinbeis University, Berlin, Germany, demonstrated how companies become viable by changing the way they think.
Reciprocating compressors have been used extensively on a global basis for far more than 100 years now. One might be inclined to assume that there is little room for groundbreaking innovations in a technological field so steeped in tradition. As an innovation and technology leader, HOERBIGER has nonetheless been able to repeatedly set new standards. The HOERBIGER XperSEAL system – a new piston rod packing for reciprocating compressors developed by HOERBIGER – is one example.

Text: Ludwig Schönefeld  Photos: Getty Images, Nikolaus Schaffner, Ralf Baumgarten
C

...rings. A pressurized oil barrier and specially developed seal-

ings prevent process gas from leaking along the piston rod through the packing — eliminating the need for nitrogen as a purge gas, external water cooling, or separate packing lubrication.

The idea behind HOERBIGER XperSEAL is based on HOERBIGER’s comprehensive hydrodynamics knowledge. The sealing rings are made of specially developed, high-perfor-

mance polymers that keep the oil in place and minimize oil loss.

At the same time, design engineers were faced with the chal-

lenge of oil escaping from the packing with every stroke. They solved the problem by employing the hydrodynamic principle, which was previously known for hydraulic cylinders, but had never before been used in compressor packings. HOERBIGER developed designed seals that pump the oil volume back into the packing with the return stroke. As a re-

sult, HOERBIGER XperSEAL does not consume any more oil than conventional packings during operation.

THREE SYSTEM COMPONENTS FOR SEALING SUCCESS

The HOERBIGER XperSEAL system consists of three system

components: the XperSEAL packing, the XperSEAL unit, and the Ex-Box-S supplying the power.

The XperSEAL packing contains the sealing rings that form the gas-tight oil barrier. A conventional compressor packing con-

sists of cut sealing elements, which are movable and sur-

round the piston rod. HOERBIGER XperSEAL replaces these functional elements with a pressurized oil barrier. Sealing rings made of specially developed, high-performance poly-

mers keep the oil in place. They support the formation of a precisely controlled volume of oil that adheres to the surface of the piston rod, making it impossible for gas to escape as long as the oil pressure exceeds the gas pressure. Leak-free operation is ensured throughout the entire service life of the compressor. Compared to conventional packings, HOERBIGER XperSEAL even retains its sealing properties when the com-

pressor is shut down. The XperSEAL packing is designed to allow direct replacement of existing packings. This makes the system an attractive alternative to traditional packings in the aftermarket as well.

The XperSEAL unit supplies the oil and oil pressure for the packing. It continuously measures the oil pressure, tempera-

ture, and volume in the system. Integrated cooling always ensures the optimal oil temperature. Water cooling is not re-

quired for the packing in the compressor, eliminating com-

plex cooling channels in the design of the packing. If the oil pressure should drop unexpectedly, the system automatically switches to an emergency function, which is a vented, or a rinsed and cleaned mode of the packing.

The Ex-Box-S provides the power supply for the XperSEAL unit and monitors the operation of the packing. It displays the oil level, temperature, and pressure, and can be mounted directly on the compressor, even in hazardous areas. Additionally, it serves as the interface between the HOERBIGER XperSEAL system and the customer’s primary control system. All readings can optionally be relayed to a DCS/PLC system.

KEY TECHNOLOGY IN USE

The HOERBIGER XperSEAL system gives users the certain-

ity that they are in compliance with statutory environmental regulations. In addition, the design of the XperSEAL system boosts the compressor’s reliability. This results from higher safety standards due to the integrated leakage monitoring and the elimination of fault-prone packing cooling.

This makes the HOERBIGER XperSEAL system a key tech-

nology for the efficient and emission-free operation of recip-

rocating compressors.

Even before it was officially unveiled during the European Forum for Reciprocating Compressors (EFRC) Conference in Vienna, Austria, in September 2014, leading market players decided to use the HOERBIGER XperSEAL system. Immedi-

ately after the market launch, the first series-produced HOERBIGER XperSEAL systems were installed as part of the overhaul of a gas compressor station in the Netherlands. Sealing of the compressors used by Swedish energy compa-

ny Öresunds Kraft, AB for refueling city and regional buses with natural gas is an excellent example of how HOERBIGER XperSEAL systems can also set standards outside traditional fields of application for reciprocating compressors.

The test series presently conducted by a leading manufac-

turer of reciprocating compressors for biogas applications over a pressure range of 4 to 40 bar are also very promising. After positive pilot tests, in the future the reciprocating compressors of this manufacturer will come standard with the HOERBIGER XperSEAL system.

In the aftermarket business, HOERBIGER has already gained Service customers in the United States and Egypt, thanks to the compelling unique features of XperSEAL system com-

ponents. In the United States, the system is in use in a nat-

ural gas facility. In Egypt, the compressors of a propane cooling plant were fitted with the XperSEAL system.

The test units have now run reliably for more than 43,000 hours, showing no signs of leakage. In all three field appli-
cations, oil consumption is less than that measured previously in conventional sealing systems. On average, HOERBIGER XperSEAL units consume 0.5 to 1.5 liters of oil per day per packing.

HOERBIGER ASSUMES RESPONSIBILITY

Reliability, efficiency, and environmental soundness are properties that customers in the oil, gas, and process in-

dustries expect of every machine. In terms of its compo-

nents and services, HOERBIGER delivers a sustainable contribution to meet these criteria, which are the most crucial and valuable ones for the customers’ investment decisions.

Awareness of these customer needs led to the creation of the REE Audit consulting approach in recent years, where HOERBIGER experts develop suggestions to optimize reliabil-

ity, efficiency, and environmental soundness for customers.
The year 2015 is an ACHEMA year: the world’s largest trade show for the petrochemical, process, and chemicals industries opened its doors in Frankfurt am Main, Germany, from June 15 to 19. HOERBIGER brought five innovations to the event, among them the new XperSEAL sealing system.

HOERBIGER at ACHEMA 2015

HOERBIGER has been an exhibitor for years and can look back on a successful presence. The zero leakage XperSEAL reciprocating rod seal, the eHydroCOM compressor control system, the intelligent TrivAX™ valve actuator, the piezo-pneumatic positioner modules, and the new REE Audit service offering drew big crowds at the HOERBIGER booth. The innovations help plants in the oil, gas, process, and chemicals industries operate more safely, reliably, efficiently, flexibly, and sustainably.

HOERBIGER XperSEAL is the first compelling technical solution for the prevention of gas leaks that is ready for equipment operators. Efforts are made today to reduce the impact of leakage gas on safety and the environment by rinsing the system with nitrogen or burning off the gas. “In terms of the environment, however, these are not sustainable solutions for the leakage problem,” Hold comments. “On the contrary: they create added costs, and the complex- cycle of conventional packings, leakage rates are unacceptable high for equipment operators.

Experience has shown these losses to be even higher in worn or damaged packings. Close to the end of the life cycle of conventional packings, leakage rates are unac-
ceptably high for equipment operators.

Another HOERBIGER highlight at the trade show was the presentation of the all-electric eHydroCOM capacity control system for reciprocating compressors. The system gives the user stepless capacity control for reciprocating compressors that allows the compressor to be set exactly to the required flow rates, reducing energy consumption by up to 40 percent.

In addition to the new XperSEAL sealing system, HOERBIGER also premiered the new TrivAX™ valve actuator. The intelligent TrivAX™ valve actuator reverses the trend of complex systems without compromising safety. The integrated Smart Partial Stroke Test (sPST) drastically reduces maintenance-related plant downtime, while extending maintenance intervals to five years. HOERBIGER TrivAX™ blends maximum safety standards with extremely simple installation, operation, and maintenance.

The same goes for the piezo-pneumatic positioner modules made by HOERBIGER. The advancement of the modules was work on an innovative product that was showcased at the 2015 ACHEMA. Worldwide renowned manufacturers rely on this technology component produced only by HOERBIGER, a performance-defining component in pneumatic drives.

XperSEAL SETS NEW STANDARDS

With every product innovation, HOERBIGER assumes responsibility for the reliable, efficient, and environmentally sound operation of its customers’ equipment,” says Johann Hipfl, CEO of the Strategic Business Unit Compression Technology. “Our fundamental approach – we make technology work – has prompted us also to give sealing of compressors and the problem of harmful gas leakage some serious consideration.”

There are a variety of reasons why operators of reciprocating compressors generally want to prevent gas leakage. The cost effectiveness aspect: gas costs money and is too valuable a resource to be wasted through leaks. The environmental aspect: natural gas has a very high global warming potential (GWP). And the safety aspect: gas that leaks uncontrolled poses an explosion and poisoning hazard.

“Modern packings for piston rods are durable because they are made of high-performance materials. Still, since they are wear parts, they form a weak spot in every reciprocating compressor,” explains Product Manager Christian Hold. “A typical oil-lubricated packing for piston rods on a large compressor loses 300 to 1,500 liters of gas per hour, which equates to more than six tons a year in a four-cylinder compressor used to compress methane.”

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XperSEAL SETS NEW STANDARDS

HOERBIGER XperSEAL is the first compelling technical solution for the prevention of gas leaks that is ready for production.

Given its performance-defining unique features and extremely positive practical testing to date, opportunities look good for the zero leakage technology of the HOERBIGER XperSEAL system to set the standard in the rings and packings segment for the efficient and emission-free operation of reciprocating compressors.

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By developing XperSEAL, HOERBIGER created a sealing system that entirely prevents leakage loss during the operation of reciprocating compressors. Swedish energy firm Öresundskraft AB, headquartered in Helsingborg, equipped a compressor with XperSEAL as part of a pilot project. This reduces greenhouse gases escaping into the atmosphere by approximately 10,000 liters every day, compared to before the installation of XperSEAL.
In the town of Helsingborg in the south of Sweden, which is home to some 100,000 inhabitants, all city buses and the majority of regional buses have run on a mixture of compressed natural gas (CNG) and biogas since 2005. The fleet is filled at the city’s bus depot, where some 150 refueling operations are carried out on average every day. Municipal energy company Öresundskraft supplies the filling station with gas. “Energy for a better world. Power for the region.” is Öresundskraft’s vision.

“All our corporate activities that are focused on a commitment to the environment and society are aligned with this motto,” comments Johan Klinga, Head of Öresundskraft’s Gas Networks Department. For evidence of how consistent Helsingborgians are in translating their vision into business operations, one only needs to look at how they fuel the city’s fleet of buses.

**METHANE – A BURDEN ON THE ENVIRONMENT**

Fifty percent of the gas mixture used in the buses consists of CO₂-neutral biogas, with the other 50 percent being compressed natural gas coming from the Tyra gas field in Denmark. This vehicle gas reduces carbon dioxide emissions of the municipal bus fleet by approximately 60 percent over diesel fuel. The only drawback was leakage from the compressor, which compresses the supplied gas before it is used in the buses’ tanks.

“We discovered that the compressor was losing methane gas and quickly learned that this is a typical and known problem in the compression of gas fuels. But we didn’t want to accept this. We measured the losses and were searching for a solution to minimize them,” Klinga explains.
One liter of released methane has about the same harmful effects on the climate as 21 liters of carbon dioxide. The three compressors in Öresundskraft’s plant compress between 16,000 and 22,000 normal cubic meters (Nm³) of natural gas every day. A normal cubic meter equals 1000 liters. The measured loss of gas was 300 to 1,100 liters per operating hour for each compressor. "With XperSEAL, our engineers had devised a solution that delivered good results during test runs in the lab. Öresundskraft uses the same type of compressor in its bus depot as we have in our lab. So we inquired whether Öresundskraft was interested in becoming the first company worldwide to test XperSEAL," says Magnus Elnertz, HOERBIGER Service Manager in Sweden. In 2012, HOERBIGER installed the sealing system in one of the three compressors in Helsingborg, including the RecipCOM monitoring system, which measures operating data and transmits it to HOERBIGER for evaluation. “When it turned out that HOERBIGER had found a one-of-a-kind technical solution to eliminate loss from leakage, we first thought it was too good to be true,” Klinga remarks.

Compressed natural gas (CNG)

CNG is an alternative to gasoline and diesel. Compressed natural gas and biogas can be used as motor vehicle fuels. The main constituent of CNG is methane, a colorless and odorless flammable gas. It is created near the Earth’s surface as a result of biological processes, and underground by geological processes. As a greenhouse gas, methane contributes to global warming. The filling station of the city of Helsingborg is supplied with natural gas and biogas via a pipeline and the city’s supply grid. Before the gas is used in the tanks of the buses, it must be compressed to a pressure of 250 bar. This is the only way for the tank to hold enough gas for the buses’ operation.

The XperSEAL system independently monitors a number of functions. This allows performance monitoring of the main packing while also increasing operator safety.

GAS LOSSES NO LONGER MEASURABLE

The basic idea behind XperSEAL is a pressurized oil barrier that is formed around the piston rod, while specially designed oil rings suppress the loss of oil. The oil barrier prevents pressurized gas from leaking along the piston rod as long as the oil pressure exceeds the gas pressure. “The system works splendidly. We have not measured any leakage loss since XperSEAL was installed. Additionally, the compressor is running more smoothly, and the number of operating hours between maintenance has significantly increased. We are saving 0.75 liters of oil per day with the new system, which also lowers our costs. The investment pays off economically and environmentally,” explains Lars Stjärneblad, Head of the bus depot.

PRODUCT WITH POTENTIAL

Magnus Elnertz had XperSEAL installed on the remaining two compressors around mid-October of 2014. The installation on the first compressor, which ran as a pilot project, was replaced, so that all three compressors now have identical equipment. Johan Klinga adds: “This makes us the first local transit company worldwide to have achieved natural gas filling without leakage loss. It is a tremendous success to make a contribution to the environment together with HOERBIGER and take this important step forward. Considering the number of natural gas filling stations in Sweden and Germany alone, not to mention the major refineries, the potential of XperSEAL is obvious. We took the first step – now we hope that others will follow.”
WITHOUT FAIL…

HOERBIGER valve actuators score with fail-safe function
Geneva Airport is supplied with kerosene from the Marseille region via a pipeline owned by Société du Pipeline Méditerranée Rhône (SPMR). The distribution station in Saint-Julien-en-Genevois, located right at the border between France and Switzerland, plays a central role in this process. Electrohydraulic valve actuators made by HOERBIGER ensure that the station’s safety is up to par.

Trapil was founded in 1950 by the French government as “Société des Transports Pétroliers par Pipelines” initially to supply the region around Paris with petroleum products from refineries located at the lower Seine and near Le Havre. Later, the pipeline from the Mediterranean Sea to the Rhône and the NATO pipelines in France were added. Today, Trapil’s network stretches across 4,700 kilometers and has 160 pumping and distribution stations as well as more than 850,000 cubic meters of storage tank capacity. This makes Trapil the oldest and largest pipeline operator for refinery products in Europe. The company supplies premium gasoline, automotive diesel, heating oil, jet fuel, and a variety of semi-finished and intermediate products – more than 32 million tons a year – to airports and major cities. The company, now operating as a stock corporation, has approximately 750 employees and annual sales of some 160 million euros.

Trapil has operated PMR since 1968, a pipeline that connects the Mediterranean Sea to the Rhône-Alpes and Geneva regions and is owned by Société du Pipeline Méditerranée Rhône (SPMR). The main pipeline connects the cities of Fos-sur-Mer and Puget to the centers in Lyon, Annecy, and Geneva over a distance of 760 kilometers, has 16 pumping stations, 12 delivery terminals, and supplies tank farms with 328,000 cubic meters of storage along the way. The network is connected to five refineries, two dispatch stations, and 19 depots.

SPMR also transports kerosene from Fos-sur-Mer near Marseille to the airport in Geneva. Saint-Julien-en-Genevois, close to the Swiss border at the southern edge of the Geneva basin, marks the end of the pipeline on French soil. Here, the kerosene is distributed to Sappro, the pipeline operator on the Swiss side. One major challenge is safety aspects since, at times, the transport must be stopped quickly and safely. “If excess pressure occurs, or in the event of a power failure, we can completely isolate and secure the Swiss pipeline here,” explains one of Trapil’s safety specialists.

Safety is a topic of top priority for pipeline operators such as SPMR and Trapil, which also bears responsibility for all the control and monitoring equipment. The valve in the station, for example, must close reliably within two to five seconds, interrupting the flow of petroleum products. If it were to close faster, the pressure would rise so much that the pipeline would be at risk of bursting. If it closes more slowly, damage may result at the customer’s end.

The actuator of these valves plays a very strategic role in the safety and functionality of the pipeline. In the early years, valve actuators were used in which the safety function was regulated via a nitrogen accumulator. However, there was a major disadvantage: the equipment had to be manually reset on site after every use – even if only testing was involved. The constant replacement of gas cylinders resulted in added costs.

Text: Wolfgang Leppert  Photography: Ralf Baumgarten
“HOERBIGER WAS THERE FOR OUR TECHNOLOGICAL NEEDS RIGHT FROM THE START AND ADDRESSED OUR REQUESTS.”

Project manager, Trapil

1 The distribution station in Saint-Julien-en-Genevois plays a central role in the supply of kerosene to the Geneva Airport.

2 Constant condition monitoring of the drives supplies the control center with all the data.

3 Special tools are required to inspect the bladder accumulator.

Three actuators a year with products from HOERBIGER, although some additional convincing was needed. After all, the TriVAX™ was still very new, so no reference applications existed as of yet. Trapil still decided in favor of HOERBIGER’s solution for three crucial reasons: the technologically sophisticated product, the reliability and trustworthiness of the technicians, and the price-performance ratio. Additionally: “HOERBIGER was there for our technological needs right from the start and addressed our requests,” explains a project manager. As a result, HOERBIGER ultimately equipped the first two valves in Saint-Julien-en-Genevois with the innovative electrohydraulic actuators: one unit at the input and one unit at the output of the station, in a redundant design for safety reasons. The compact package – consisting of an actuator, power unit, accumulator, and electric control unit – was attached directly to the valve in a space-saving installation.

Trapil recognized potential for improvement. The opportunity for action arose when the entire station was scheduled to undergo a technical rebuild and upgrade two years ago. The conceptual design specification called for an autonomous station with fully automatic operation, which would allow full remote control and monitoring. “The goal of our quest for a supplier for highly safe actuators was to fit the station with HAZOP-compliant equipment,” comments the project manager working with HOERBIGER. A HAZOP (hazard and operability) analysis is a way for a seasoned interdisciplinary team to examine the safety of technical equipment.

The initial contact with HOERBIGER materialized via Sales Manager Rémy Hoerdt, who was responsible for sales in France at the time. A local meeting was scheduled with the responsible parties, where initial technical details were able to be clarified – and a personal basis of trust was developed. “All requirements centered around the fail-safe function,” Hoerdt recalls. The goal could not have been achieved with an all-electric actuator, and a pneumatic solution would likely have exceeded the scope of the plant in terms of cost. The actuators additionally have to work reliably under relatively demanding climatic conditions with large temperature fluctuations and must operate autonomously when the power supply fails.

The HOERBIGER electrohydraulic valve actuator TriVAX™, which was brand new at the time, was a perfect fit for this requirements profile. The compact powerhouse combines electric drive technology with the power density and high control dynamics of hydraulics. The tank, pump, and motor are combined in a flame-proof encapsulated unit. The entire pipeline, encased power unit is ATEX-certified, offers a host of safety functions, operates autonomously, and requires only one electrical interface. For commissioning or in the event of a power failure, it takes just a few steps to manually open and close the valve from the outside using the hand wheel. “This way we can control, open, and close as usual, activate the fail-safe mode, and reset everything again without needing staff on site,” Hoerdt emphasizes.

These performance features were also compelling for Trapil, although some additional convincing was needed. After all, the TriVAX™ was still very new, so no reference applications existed as of yet. Trapil still decided in favor of HOERBIGER’s solution for three crucial reasons: the technologically sophisticated product, the reliability and trustworthiness of the technicians, and the price-performance ratio. Additionally: “HOERBIGER was there for our technological needs right from the start and addressed our requests,” explains a project manager. As a result, HOERBIGER ultimately equipped the first two valves in Saint-Julien-en-Genevois with the innovative electrohydraulic actuators: one unit at the input and one unit at the output of the station, in a redundant design for safety reasons. The compact package – consisting of an actuator, power unit, accumulator, and electric control unit – was attached directly to the valve in a space-saving installation.

If a valve should ever be prevented from closing properly during regular operation, the safety buffer of TriVAX™ comes into play – entirely without power. In the ultimate emergency, it can even be operated manually. Trapil does not plan on needing this measure, though, because the completely automated station operates entirely autonomously. Its operation is controlled and monitored from the Lyon area. Constant condition monitoring of the actuators, along with temperature measurement at the housing, on the pump, and in the oil tank, supplies the control center with all the necessary data. Technicians are no longer required to travel to the site for the plant’s safety and functional tests that are carried out several times a week. Maintenance expenditures are also manageable since the actuators operate largely maintenance-free. An overhaul is needed only every three to five years. “This solution saves us frequent checks,” comments one of Trapil’s technicians.

HOERBIGER convinced Trapil and SPMR of the superior performance features of TriVAX™, as is also evidenced by new projects that are planned for the near future. All other stations along the pipeline are scheduled to be incrementally upgraded and equipped with HOERBIGER units. SPMR plans to replace three actuators a year with products from HOERBIGER.
How companies become viable by changing the way they think

ILLOGICALITY

IS THE LOGIC OF INNOVATION

How companies become viable by changing the way they think
Innovations are predicated on the reconciliation of paradoxical demands. Scientific work, in contrast, without exception follows the axioms of Aristotle’s logic. The thought framework of this logic does not allow paradoxical demands to be resolved without compromise. Innovation, therefore, necessitates thinking patterns that go beyond the axioms of logic and permit promising illogical concatenations. The Contradiction Model developed at WGIS Institute for Innovation Research and Corporate Development in Coburg, Germany, describes a proactive thought technique that systematically and deliberately provokes innovation.

SHIFTING BOUNDARIES THROUGH NEW THINKING

Several decades ago, an unknown athlete at the time revolutionized the Olympic high jump event. Until the 1960s, the training philosophy for all competitors followed the premise of targeted muscle growth and weight gain avoidance to the greatest extent possible. The key was believed to guide the body’s center of gravity as closely as possible over the bar. For decades, athletes would continually push the predominant style known in expert circles as the straddle to the limit. Optimizing this technique followed the logic of “more for more,” or in other words, an improved leg-strength-to-body-weight ratio factor for greater jumping height.

Physiologists were convinced at that time that the human body could jump over a maximum of 2.35 meters on Earth without mechanical aids, the basic prerequisite for compliance. The world record was already 2.34 meters, so the maximum conceivable height and therefore the predictable height were all but attained. The entire competition focused on the last few millimeters that were within reach.

In 1968, a young athlete who followed his own philosophy took part in the sporting event. He wanted to invent his own way. He did not want to believe in universally accepted boundaries. And he was certain: “To accomplish new things, I must think differently!” His name became the epitome of his new jumping style: Dick Fosbury took advantage of the laws of dynamics to guide his body higher than the dynamic pivot point of the motion, heralding a new era of high jump. He redefined the bar of what was achievable. Today, the record is 2.45 meters. By changing
his way of thinking and taking a challenging view of what was deemed to be the attainable limit, Fosbury revolutionized the high jump.

New ways of thinking have created “disruptive developments” (according to Clayton Christensen in “The Innovator’s Dilemma”) and redefined the rules of the game, from sporting disciplines to the worlds of industry.

Successful companies succeed in specifically breaking through universally accepted mindsets and achieving a competitive edge through innovations. In the past, enhancing the performance capability of cutting tools required ever-better material quality and, consequently, more effort, for example. So the question arises: Is this the way it has to stay? Resolving such contradictions paves the way for paradigm shifts and, as a result, decisively helps to ensure the viability of companies or jeopardize the future of competitors. Still, this pattern for success is not exclusive to industrial enterprises. The example of Professor Muhammad Yunus, the pioneer of the microcredit concept, demonstrates that overcoming the contradiction of profit versus ethics may even earn a Nobel Prize.

Scores of companies maintain their own innovation management organizations, but not all of them employ them as a basis to create new standards in competition. Does innovation management help us achieve groundbreaking events, or does it perhaps instead keep future results closer to what is ordinary? Does innovation management equate to optimizing, or is it a purposeful shift of performance limits? Creativity techniques as part of the brainstorming process are common measures in companies intending to fill the innovation funnel with the largest possible number of ideas. Still, this approach reaches its limits when it comes to inspiring pioneering directions with the necessary degree of reliability in terms of the result. Experience from more than 100 projects conducted with over 60 companies, among them many hidden champions,
has shown that a strategic void appears to exist in the majority of companies. Companies must be aware of thought frameworks and systematically overcome contradictions if they want to be able to identify and develop game-changing innovation potential. The key here is: managers have to do things right, and leaders have to do the right things.

There is one crucial challenge, however: the increased performance capability in various technological disciplines over the course of the last century can qualitatively be described in the form of exponential curves. Manufacturing, logistics, and information technologies are mentioned here only by way of example. A comparison of these developments to the progress in thinking techniques, however, seems to indicate that growth in the latter is lagging. We tackle new problems using the same approaches that our predecessors already employed. Hubert Pietschmann refers to this basic form of our Western thinking as a mechanistic thought framework. Following Aristotle’s logic, reasoning within this thought framework is deeply rooted in the quest for freedom from contradiction. People develop their personal thought framework in keeping with their individual educational background and experience, which at the same time defines the boundaries for their reasoning and forecasting reliability.

So what is the impact of thought frameworks on companies? Unconscious patterns for solution strategies and decision-making processes exist, which are very useful on the one hand since we do not have to reinvent the wheel every day, but on the other hand these frameworks for action along the lines of “this is how we’ve always done it” impede effective new developments.

**Gunther Herr**

Professor Gunther Herr is a mechanical engineering graduate from Coburg University, Germany, and the University of Huddersfield, Northern England. He earned his doctorate in the field of innovation theories as an innovation management employee of BMW AG in Munich, Germany. After achieving his doctorate in 2000, he became a partner at WOIS Institute for Innovation Research and Corporate Development in Coburg; Gunther Herr has authored and co-authored numerous publications on innovation strategies. Today he is a junior professor for comprehensive business innovation strategies at Steinbeis University in Berlin. He also lectures at Coburg University and the University of Prague.
We propose to break down the innovation development process into three phases. The first phase is dedicated to creating awareness of the personal and cross-industry thought framework that defines today’s competitive logic. With this basis, phase two is about formulating and specifically challenging the universally accepted performance limit within the industry in the form of a key contradiction. The goal is to recognize new problems. The logic of the analysis follows “illogicality,” which provokes the formulation of new questions due to paradoxical challenges.

Finally, phase three involves the search for and development of an innovative solution to this contradiction. This enables a company to break out of the competitive marathon on the spiral of upward development and to take an innovative shortcut into the future.

ESTABLISHED MINDSETS AS OBSTACLES

What is a contradiction? A look at intellectual history shows that even in antiquity paths were followed that proved to have serious consequences. The first crossroads involved basic forms of thinking: Plato’s dialectic versus Aristotle’s logic. Aristotle, in turn, laid the foundation for the second path, the birth of natural sciences in the 17th century, which was about the question for the theory of knowledge. We can describe it with the following antithesis: truth versus empirical knowledge. To this day, science has always endeavored to make interrelationships measurable so as to determine causal explanations, which in turn result in a logical result due to reproducibility.

Contrary to other cultures, the Western world does not aspire to diversity in its thinking patterns. The one that is best suited prevails as the universal pattern. The establishment of the mechanistic thought framework consequently also constitutes success for natural sciences and the associated technological accomplishments to this day. Plato’s dialectic has all but entirely disappeared from public thinking and the public organization of human coexistence.

Plato summarized the problem of change to this effect: “Some things always are, without ever becoming. Some things become, without ever being.” However, since something obviously is, and additionally is subject to constant change – or in the process of becoming – we are faced with an aporia, an unresolvable contradiction. Plato in his Theory of Ideas synthesized this contradiction by dialectical thinking. However, we have largely lost the ability to deal with aporia due to the tremendous success of Aristotle’s logic. A contradiction is consequently an impasse situation that we, in our mechanistic thought framework, can only meet through compromise.

So what challenges does this pose for companies? In an environment subject to constant change, companies must become sustainable. This will necessarily lead to conflicting interests, such as preserving tradition versus renewal, which they must face in change management projects, for example.

Traits of a challenge with key contradiction and breakthrough innovation potential

- The discussions of a critical mass of key players with extensive industry know-how has resulted in this barrier, taking all relevant aspects into account.
- Strategic means of orientation, such as trends and laws of upward development, suggest that resolving the contradiction could open up future potential. In doing so, one should have foresight.
- No resolution of the contradiction is immediately identifiable based on the existing logic of competition.
- A resolution of the contradiction, to a certain degree, requires creativity or applying analogous circumstances outside the existing thought framework.
- A possible solution would set new performance standards.
Conflicting interests are ubiquitous barriers, which within the meaning of logic are met by searching for the best compromise. Not only in politics is it common to start out negotiations by formulating the goal as that of achieving compromises. By definition, however, a compromise means that an agreement is reached between two parties in which both, by mutual agreement, cede parts of their original demands. According to Plato, however, no synthesis is achieved for contradictions through compromise. Future challenges of companies and society, such as economy versus ecology, necessitate mental agility leading away from established “either–or” thought frameworks. Dialectics makes it possible to develop “both … and” solutions, which do not use today’s benchmarks as a reference. We frequently imagine the future from today’s perspective, which makes certain dreams seemingly impossible to realize. Instead, it is much more promising to initially create an image of a radical future. We arrive at new assessments when we then think in developmental directions back from the future. These assessments free us from the limitation of current expert knowledge and lead away from compromises.

A delta exists between today’s situation and a radical-ideal future. We need ways of thinking, though, to overcome this delta. In general, these ways give rise to unusual questions. So how is it possible to develop the path to the future? It is useful to zoom in on the delta and describe it as a barrier to logic. It is a relatively easy task to formulate two goals that would be desirable to achieve, but cannot be achieved at the same time due to knowledge of logical interrelationships. This describes a contradiction – a quandary with seemingly no way out. In the spirit of Aristotle’s logic, customarily we would now search for compromise solutions that meet one objective to the extent possible, without ignoring the other too much. Any compromise, however, will be a poor compromise, since in the end none of the objectives can be met fully.

CONTRADICTION AS A CHANCE FOR UPWARD DEVELOPMENT

Hansjürgen Linde’s contradiction model shows how to operationally master this delicate balance. The comprehensive analysis of one field of challenges generally leads to insights into key interrelationships that today prevent two goals worth realizing from being achieved at the same time. This can be used as a basis for introducing a lever as a reference variable in the contradiction model. This variable is the logical explanation for the apparent impasse, but also offers the potential to formulate innovative undertakings, or the demand to fully achieve both objectives, without compromising at the expense of objectives. By innovatively solving this paradoxical challenge, it is possible to shift universally accepted performance limits in a targeted manner. We advance the following thesis: “Illogicality is the logic of innovation.” Innovative solutions systematically link objectives and reference variables in a way that is seemingly impossible from today’s perspective. They reconcile conflicting interests by allowing objectives that were previously mutually exclusive to be combined, as a result of a new logic.

IN THE DIGITALIZED WORLD, WE EXPERIENCE NON-LINEAR CHANGES IN ALL AREAS OF LIFE.
interests by allowing objectives to be combined, as a result of a new logic, which previously were mutually exclusive. The benefit of this model becomes apparent when the competition in the mobile communication industry prior to the launch of the iPhone is portrayed in the form of a contradiction. The diversity of cellular phones from a wide variety of competitors had one thing in common. The devices logically needed more buttons to equip them with a greater number of functions. On the other hand, complexity for the user logically increased as the number of buttons rose. This describes the thought framework of the entire industry at that time, narrowed down to one contradiction.

With the iPhone, Apple managed to solve the paradoxical challenge of increasing functionality while reducing the number of buttons and heralded a new era of user-friendly and seemingly endless functionality. Disruptive innovations beyond existing performance limits are created by innovatively resolving contradictions. The approach to describe barriers as contradictions offers the advantage that the challenge can be made abstract. It then becomes possible to search for suggestions in fields that, at the particular level, can hardly be related to one’s own field.

ARRIVING AT INNOVATION BY BREAKING RULES

How do companies handle innovations? Innovation management, in the best-case scenario, is managed creativity; in the worst case, it nips new ideas in the bud. In this context of continuous improvement, groundbreaking innovations appear unlikely since the logic of the existing competition persists.

Don’t we have to systematically part with rules to be able to see new perspectives? On the one hand, it is true that creativity needs freedom – so we would have to increase freedom. On the other hand, there is the traditional saying: “Necessity is the mother of invention.” So is it necessity or freedom we need?

Experience has shown that we should take both! A structured process, which guides the discussion and which offers the creative freedom to introduce new perspectives, is indispensable.

How will we find new directions with higher reasoning and forecasting reliability in the innovation process? As soon as we stop merely managing new ideas and approaches.

The process follows the notion of an “expanding focus.” The concept is about creating a process that, from the view of the transformation of the entire environment, systematically zooms in on detailed challenges and, based on innovative solutions, zooms out again to the entire new business model. The goal is to recognize prevailing developments that take place in the higher-level systems and are expected to influence our business, so as to be able to re-evaluate our own key challenges. Many companies emphasize the specific know-how of their industry when characterizing their performance capability. However, leadership to a large degree is also a matter of the “know why,” or the capability to anticipate future challenges and redefine the rules of competition.

If we believe in universally accepted rules, revolutionary innovations will not be possible.

DON’T WE HAVE TO SYSTEMATICALLY PART WITH RULES TO BE ABLE TO SEE NEW PERSPECTIVES? FROM THE FAMILIAR KNOW-HOW TO THE UNFAMILIAR KNOW-WHY!
Fratelli Vimercati s.n.c.

FROM LOMBARDY INTO THE WORLD

Sovico, a community in northern Italy home to approximately 8,500 inhabitants, is not far from Milan. Here, in Lombardy, beats Italy’s economic heart. With a population of almost 10 million, Lombardy is the nation’s leading business region. It is a commerce and international financial center, yet industry is also strongly represented here. Approximately 20 percent of Italy’s gross national product is generated in Lombardy.

Text: Jens Geisel  Photos: Ralf Baumgarten
The overall economic performance of the region is the result of more than big world-renowned corporations such as Pirelli or Alfa Romeo. Small- and medium-sized companies also contribute significantly to the economic strength. One of them is Fratelli Vimercati s.n.c. The company manufactures press brakes and guillotine shears for the global market. When it comes to press brakes, Vimercati relies on HOERBIGER technology.

In more than 40 years of company history, Vimercati has acquired a strong position on the international market for sheet metal working machines. What started out in 1973 as contract manufacturing for other producing firms has since blossomed into a globally operating business with a distribution network on all continents.

The company arrived at the deciding crossroads in 1977 when Vimercati started to produce, market, and sell mechanical press brakes and hydraulic machines under its own name. The decision proved to be prudent and correct. Today, Vimercati is a brand with worldwide recognition.

**THREE Pillars of Corporate Success**

Vimercati is an innovation-driven firm that consistently invests in research and development. “Our goal is to anticipate trends in the market and changing customer expectations and detect those at an early stage. We want to offer our customers a solution as soon as there is demand for it,” comments Mario Vimercati, who is in charge of Sales. And he adds with a wink: “Preferably even a little sooner.”

For example, Vimercati was one of the first manufacturers of press brakes to address topics such as energy consumption and green production. And it did more than deal with these topics in theory alone. The company was quickly able to offer products that reflected state-of-the-art technology.

The second success factor of the machine manufacturer from Northern Italy is its outstanding manufacturing expertise. All development and production steps – from project design, through initial cutting to size of the heavyweight steel panels and assembly, to the final acceptance inspection – are carried out in the Sovico plant. The software used to control the machines is also developed in-house.

This is a crucial advantage as competition intensifies and pricing pressure grows. “We can ensure the quality of our products at any given time and additionally have the option to quickly implement modifications desired by customers,” explains Antonio Vimercati, Head of Production in Sovico. Customization is the name of the game, which entails adapting standard designs to individual customer needs. Today, approximately 80 percent of press brakes shipped by Vimercati are equipped with custom performance features, and the trend is likely to continue.
“OUR GOAL IS TO ANTICIPATE TRENDS IN THE MARKET AND CHANGING CUSTOMER EXPECTATIONS AND DETECT THOSE AT AN EARLY STAGE. WE WANT TO OFFER OUR CUSTOMERS A SOLUTION AS SOON AS THERE IS DEMAND FOR IT.”

Mario Vimercati

Added to this is the company’s uncompromising endeavor to deliver quality. The high quality standard is evident not only from ongoing training measures for the approximately 50 employees, but also from the investments in its fleet of equipment, not to mention details such as the selection of raw materials. “When we build a press brake in Sovico, the steel for all parts comes from the same certified starting material,” says Sergio Vimercati, who is in charge of all the company’s organizational matters. Vimercati goes the extra mile out of conviction since it improves the reliability of the end products.

Success factor number three is the close ties of the company to its proprietors. Fratelli Vimercati s.n.c. is an owner-operated business. The four brothers Antonio, Marco, Mario, and Sergio Vimercati, who are the founders, hold key positions in Sales, Research and Development, Administration, and Production. They are present in the plant day by day, actively intervening in current events.

The four brothers jointly manage the company; there is no CEO with primus inter pares status at Vimercati. As an owner-operated business, Vimercati is largely independent in its decisions. It can plan for the long term and implement its strategy without appreciable influence from outside. Incidentally, there are no worries about business continuity: Arianna Vimercati, who heads Marketing, is a member of the next generation to be actively involved in the company.

FROM INFORMAL CONTACT TO TECHNOLOGY PARTNERSHIP

Informal contacts have existed between HOERBIGER and Vimercati for years. In 2011, they led to a business relationship. At the time, Vimercati was searching for a technology partner for an innovative press brake concept. “There were signs that a market would develop for presses that not only operate reliably, but also conserve resources and therefore are sustainable,” explains Sergio Brusamolino, Vimercati’s chief technician.

Vimercati looked around at potential partner firms. HOERBIGER at the time had the first test samples of the electrohydraulic ePrAX™ press actuator available. HOERBIGER ePrAX™ combines electric and hydraulic elements in a concept that reconceptualizes actuators. The electrohydraulic system overcomes key weaknesses of electrical and hydraulic systems, and instead combines their strengths.

In contrast to an all-electric actuator, HOERBIGER ePrAX™ is powerful and durable, thanks to the integrated hydraulic system. The compact, closed design featuring no oil hoses ensures clean and leak-free operation. Another advantage of the latest generation of these eDrive actuators is the ease of handling during installation and maintenance.

After intensive technical discussions and changes to numerous details, Vimercati implemented a test installation in Sovico in 2013. Performance features such as the leak-free design, energy savings, productivity increases, and low-noise operation made the difference in favor of ePrAX™.

It is the performance-defining component of an innovative press brake that Vimercati launched with the designation EHSyP tsn. 110x3060 mm. Vimercati reports productivity increases of as much as 50 percent over the base model, along with a 90 percent reduction in oil and a decrease in processing time of 40 percent.

“The feedback from our customers in response to the new press brake equipped with HOERBIGER technology is overwhelmingly positive,” reports Sales Manager Viviana Mona. Additionally, demand for follow-on products with higher performance is beginning to grow.
At 50, Ford Mustang has reached its full potential. The logo of the model introduced in 1964 is now a classic icon in the world of automobiles.

Sinewy, agile, and eager to take on curves, the latest member of a freedom-loving highway herd is making claim to be the leader of the pack. In its essence, it is close in character to the original member of this sports car dynasty, which HOERBIGER has been supplying since its fourth generation.

Text: Achim Neuwirth   Photos: Ford
Ask an animal lover to name a typically North American horse with a powerful back and rounded rump, and a specific breed readily comes to mind. And if you ask fans of high horsepower to name a legendary fastback – the classical sport coupe with a raked body shape – the answer will be the answer. The response from horse fans and gear heads alike will be none other than Mustang. Freshly groomed, athletic, and more headstrong than ever, the rear wheels of the iconic sixth-generation Ford have been tearing up the ground, getting ready to stir up the dust in international markets. For the first time Ford is officially setting its racehorse loose outside the USA, in more than 120 countries, focusing particularly on buyers in Asia and Europe.

THROBBING ALTERNATIVES

Since the Mustang has a wider build, its base engine is extraordinary for its type: a 2.3-liter four-cylinder powerhouse with a performance-enhancing turbocharger. With 317 horsepower (233 kW), the system blasts the Mustang from zero to 62 miles per hour (100 km/h) in 5.8 seconds, and easily propels it to a top speed of 145 mph (234 km/h). The 3.7-liter six-cylinder model will remain a purely US alternative, but the normally aspirated five-liter V8 will make it to foreign markets. This beast will trespass even more true-to-type in established sports car territory – galloping to 62 mph (100 km/h) in 4.8 seconds and racing to a maximum 155 mph (250 km/h). Pressing a button loosens the electronic assistance reins, and the 421 HP (310 kW) can rear back on its rear axle, letting the Mustang GT go to the races.

TANGIBLE BENEFITS

Between the front longitudinally mounted engine and the rear drive wheels, the transmission portions out shifting performance – always in six gears perfectly tuned to the Mustang. Not only automatic transmissions are available for each engine variant, keeping with the taste of European riders, each new steed can be outfitted with a 6MTI500 GJT manual transmission by Getrag (Jiangxi) as standard equipment. The HOERBIGER Group has contributed to the DNA of this transmission produced in the Nanchang factory in China by supplying complete synchronizers for all gears. These are important cellular modules allowing the gears in the iconic Ford to shift rapidly, precisely, and smoothly. This particularly supports the preferred Mustang galloping mode while providing high torque. HOERBIGER sources individual components for the 6MTI500 synchronizers globally: parts are shipped from Schongau and Oberstenfeld in Germany as well as from Changzhou, located approximately two hours northwest of Shanghai by car.

THE BEST OF TRADITION-RICH WORLDS

Despite all current technology, today’s Mustang maintains its legendary core character. Like its predecessors, it provides the most bang for the buck. Since the entire vehicle is built on production lines in the United States, it’s as American as the debut model in 1964. That model, due to its somewhat more compact body style and reduced performance compared to the early “muscle cars,” started the first “pony car” class. HOERBIGER has been part of this unique automotive success story since 1996 when the fourth-generation Mustang was provided with new, more modern engines.

However, more than 50 years of evolution have caused the wild pony to mature. Now the athletic Mustang chassis rests on four-wheel independent suspension. Asphalt cowboys corner at 1g of lateral acceleration, yet remain firmly in the saddle when the roads are bumpy and winding.
CURRENT VEHICLES
FEATURING HOERBIGER DRIVE TECHNOLOGY

FIAT 500X
The last letter of the new Fiat 500X is not capitalized by chance: the model enhances the FIAT 500 family with a fourth, versatile, and attractively designed crossover model. Thanks to being a close kin to the Jeep Renegade, the AWD model boasts true off-road DNA. Powered by a 140 hp diesel engine, even winter mountains do not pose a challenge for the 500X. Measuring 4.27 meters (168 inches) long, the top model surpasses the Cinquecento ancestor from the 1950s by exactly 130 centimeters (51 inches) – providing ample space in the upscale passenger compartment.

Three of the four gasoline and diesel engines that will be available for the market launch of the sporty Italian crossover will be equipped standard with the manual C635 6-speed transmission made by Fiat Powertrain, which is packed with plenty of HOERBIGER know-how and technology. The transmission features integrated solutions – meaning customized hub and friction systems – made by the synchronizer specialist. For six years now, these products have been used not only by Fiat, but also throughout the group by Alfa Romeo, Chrysler, Jeep, and Lancia.

VOLVO V40
Exceptional safety features are almost considered compulsory for automobiles made by time-honored brand Volvo. At the same time, model series such as the latest V40 generation prove that the premium automaker has also long mastered freestyle design. Nordic expressive design, both outside and inside, meets state-of-the-art infotainment systems and superior driving performance. The latter is particularly due to the V40’s range of engine choices – whether it’s for a traditional compact sedan or an all-around-talent cross-country version with AWD option. The spectrum of powertrains is spearheaded by the Drive-E four-cylinder models developed in-house by Volvo, which also stand out in terms of efficiency. Despite a robust 140 kW (190 hp) and 400 Nm torque, the 2-liter D4 turbo diesel, for example, settles for a possibly record-breaking low standard EU fuel consumption of 3.3 liters per 100 kilometers (71.3 mpg). This equates to CO2 emissions of merely 85 g/km.

Still, the Volvo V40 D4 is only able to achieve these values in conjunction with the manual 6-speed transmission 6MTT480 made by Getrag, in which HOERBIGER is strongly represented through complete friction systems and the sliding sleeve between the first and second gears. Incidentally, the same applies to the 6MTT450 transmission, which is provided standard with all 1.6-liter gasoline and diesel engines for the V40.
ur new yearbook echoes the fundamental spirit that has always been part of our company and has been decisive for our success to this day,” says Dr. Martin Komischke, CEO and Chairman of the Executive Board. The HOERBIGER 2014/15 Yearbook focuses on the employees’ contribution to the company’s success more than in any prior yearbook. As brand ambassadors, the HOERBIGER employees form the core of the current yearbook. At the same time, the governing bodies of the Group, Boards of Trustees and Directors, and Executive Board take a modest back seat. Worldwide, more than 100 employees and senior managers agreed to pose for the HOERBIGER 2014/15 Yearbook. The resulting photos brilliantly illustrate the enthusiasm of our employees and our cultural diversity and uniquely document HOERBIGER’s character and nature.

“EXCELLENCE & FOCUS IS NOW FOLLOWED BY MISSION EXCELLENCE & GROWTH”

The editorials of the President and CEO underscore the Group’s performance goal and set the course for its strategic orientation: “EXCELLENCE & Focus is now followed by Mission EXCELLENCE & GROWTH,” says Dr. Martin Komischke. “As a technology company, HOERBIGER will remain driven by innovations – based on reasoned marketing strategies, with products and services that offer unique selling propositions in keeping with our customers’ requirements and needs. With this approach we will make a lasting contribution to the added value of our customers’ businesses.”

The PEOPLE OPPORTUNITIES section is dedicated to the Group’s values, vision, and mission, and also establishes the context of the corporate strategy for the employees’ individual development opportunities. The direction and scope of the Group’s business model are the topic of the VALUE GROWTH section. The model is based on the unique features of performance-defining components, systems, and services, but is also very complex given its openness to diverse industrial markets. Innovations and achievements of the Strategic Business Units form the core of the yearly review from an operational perspective.

“With the HOERBIGER Yearbook we pursue the goal of explaining the abstract and quite unwieldy, yet very sustainable approach of our business model to our own employees, and also to existing and new business partners,” comments Ludwig Schönefeld, Head of Corporate Communications. The design of the yearbook ties into the strong sense of community, which is reflected in the HOERBIGER corporate culture, values, vision, and mission. “By expressing our approach to life in images and text, we bolster the engagement of the employees of the Group,” says Schönefeld. “This helps to ensure that change and development are not considered a threat at HOERBIGER, but rather an opportunity for individual careers and continuous development.”

KEY STRATEGIC MEDIUM FOR THE EMPLOYEES, EXCITING READING FOR CUSTOMERS AND BUSINESS PARTNERS

The HOERBIGER Yearbook is a way for the Group to express its gratitude to the employees for their outstanding work in 2014 in all Strategic Business Units. As the key strategic medium, the yearbook also communicates the strategic direction for the coming fiscal years. The circle of readers additionally includes HOERBIGER customers and business partners. “It is very important to me to make this – in my view once again remarkably done – overview of the many facets of the HOERBIGER Group available to the business partners and friends of our company as well,” says CEO Dr. Martin Komischke.
The HOERBIGER corporate website is now online in Russian, making www.hoerbiger.com available in a total of eight languages. The new language version allows customers from Russia and other CIS nations such as Ukraine, Kazakhstan, and Uzbekistan to gain considerably faster and more convenient access to HOERBIGER product and corporate information.

In July, a very special compressor left the manufacturing facility of Ariel Corporation headquartered in Mount Vernon, Ohio, USA. The 50,000th reciprocating compressor is a KBB/6 headed to Wayne County, Ohio, USA, where it will be used in Mainline Compressor Station 2 as part of the new 711-mile Rover Pipeline. This gas transportation network is designed to move gas from the rapidly expanding Marcellus and Utica shale production areas to US markets in the Midwest, Great Lakes, and Gulf Coast regions. The milestone compressor, which is equipped with performance-defining HOERBIGER valves, is one of Ariel’s largest compressors with up to 10,000 bhp (brake horse power). HOERBIGER supplied valves in 1966 to build the first Ariel compressor SN #1 and has since then delivered components to Ariel as a business partner.

“DCT-type synchronizer” is the title of the project for a synchronizer for automated transmissions that was fundamentally redeveloped by HOERBIGER. The world’s largest independent synchronizer manufacturer unveiled the concept and prototypes of the new development for the first time to the expert community at the VDI Congress “Transmissions in Vehicles 2015.” The DCT-type synchronizer combines the proven components of the HOERBIGER ClassicLINE synchronizer – which has very successfully proven its worth in innumerable commercial applications – with the benefits of a dog clutch.

“The installation space decreases by up to four millimeters, and transmission manufacturers gain more than ten percent more space,” says Head of Development Dr. Ansgar Damm about the advantages for the customer. “In addition, for the driver we reduce undesirable noise and vibration that can occur with shifting.”
The first TriVAX™ valve actuator equipped with a safety function from the Hoerbiger Altenstadt plant, and process industries.

As a linear, part-turn, and positioning actuator, TriVAX™ technology was developed specifically for maximum efficiency in the operation of valves equipped with safety functions. Benefits include no maintenance for five years, reliable operation, and low installation costs due to the all-electric connection. A new technical feature is the fully integrated Smart Partial Stroke Test, which improves the valve’s and actuator’s reliability during ongoing operation. TriVAX™ technology is used in safety-relevant applications in the oil and gas, power plant, and process industries.

PRODUCT RELEASE AND FIRST SHIPMENT OF ELECTRIC TRIVAX™ VALVE ACTUATOR

The first TriVAX™ valve actuator equipped with a safety function from the Valve Automation Business Segment successfully completed the internal product release between February and June 2015 with three of its configurations, resulting in approval of the TriVAX™ valve actuator for market launch as a linear, part-turn, and positioning actuator.

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