

Freudenberg Dichtungs- und Schwingungstechnik GmbH

Without seals, nothing runs

When Professor Walther Simmer developed the Simmerring® in 1929, he surely never imagined that his sealing ring would be used in virtually every car and machine on the market today. This 1940 patented invention is literally the heart of Freudenberg Dichtungs- und Schwingungstechnik GmbH's comprehensive selection of sealing products.

The company was originally founded as a tannery, but has become increasingly diversified and internationalized over the past 150 years. Today, sealing and vibration technology is the most significant line of business, in which some 9,000 persons are employed worldwide. Freudenberg has a total of around 30,000 employees all over the world. More than 80,000 different types of seals are manufactured by Freudenberg for use in vehicles, systems and machinery in various branches of industry. Approximately 37% of the volume generated by the company is realized in the automotive industry, where it produces and supplies

gaskets and seals for all motor types: exhaust manifold gaskets and cylinder head gaskets are just two examples.

Freudenberg gaskets and seals can also be found in wind power stations, dentist drills, agricultural

Continued on page 2



BRANKAMP PK4U with sorting function installed on Helmerding-press



PK 4U in use on a Bret-Pack-20 control panel, dating from 1990. Retrofitting older machines creates immediate benefits.

Intelligent stamping tool

BRANKAMP wins grant-competition

Automotive manufacturing and its suppliers are a key industry in German province North Rhine-Westphalia (NRW). NRW put out calls for the „Automotive+Produktion.NRW“ grant competition in order to promote innovation. The best ideas were sought for future development in automotive and production engineering. The jury was convinced by BRANKAMP's contribution of the „Intelligent stamping tool“. The idea of electronic components capable of recording and processing process data, speeding up production while making it more reliable, appealed. The BRANKAMP-team is pleased to receive an award grant out of the 30 million Euros in total provided for winning projects.

NEWS

CHINA: DOMESTIC MARKETS ATTRACT MULTINATIONAL MANUFACTURERS

Multinational manufacturers are increasingly focused on accessing the growing China market while the number of companies viewing China purely as an export base continues to decline, according to a survey by the American Chamber of Commerce in Shanghai and consulting firm Booz & Company. The survey of 202 foreign manufacturers in China shows that nearly 83% of the companies said their primary motive for locating manufacturing operations in China was to access Chinese markets. China is thus no longer viewed solely as a hub for low-cost exports. The growing domestic market in China offers rich opportunities to investors.

GM PROVIDES FUNDING FOR BRIGHT AUTOMOTIVE'S PLUG-IN HYBRID

Bright Automotive and General Motors Co. announced in August that they have agreed to pursue a strategic relationship and that GM will provide funding to the Indiana automaker. This will help accelerate Bright's production of the IDEA, a new plug-in hybrid commercial vehicle. With this deal, Bright gets the necessary financial support for mass production of the IDEA. Upon completion of the agreement, General Motors Ventures would have a minority stake in Bright Automotive and Bright would have access to GM technologies, and advanced engine and transmission systems, for its vehicle.

QUOTE OF THE MONTH:

»Many are stubborn in pursuit of the path they have chosen, few in pursuit of the goal.«

Friedrich Nietzsche, 1844 – 1900, German philosopher, poet and classical philologist.

The special issue

page 3

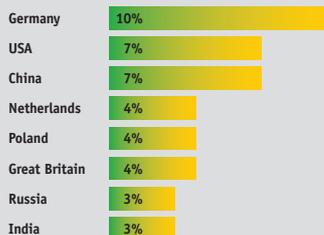
When the tool-making crash comes: Collision avoidance ...

News

RENAULT: FLUENCE WITH ELECTRIC POWER SYSTEM

In the first half of 2011, Renault will build the notchback-limousine Fluence with an electric power system in Bursa, Turkey. The Turkish factory also produces the Fluence-variant with a conventional internal combustion engine. The electric vehicle is based on the Fluence Z.E. concept that Renault presented on the IAA in Frankfurt, Germany in September 2009. Renault aims for a head-start in production and quality while simultaneously cutting costs using their Turkish facilities. The Fluence Z.E. will be launched in the first half of 2011 in Israel and Denmark. Other markets will follow.

FIGURES OF THE MONTH: Top locations for worldwide logistics centers



Source: Ernst & Young, Germany as a location (for business & industry), 2008 study

Germany is in the lead when it comes to top locations for logistics, with a clear advantage over its European neighbours. The Federal Republic assumes a geographically central position in an expanded Europe. In addition, Germany possesses the most dense and best developed transportation and communication infrastructure among all the European nations.

IMPINT

Publisher:

Dr.-Ing. K. Brankamp System Prozessautomation GmbH, Max-Planck-Straße 9, D-40699 Erkrath, Germany

Responsible for content under the German press law: Tom Brankamp, Michael Tobias (enterpress)

Portrait

The BRANKAMP-Scientist

Research and development is an elementary component of BRANKAMP's business, because innovation is at the core of its success. For the last three years, Dr. Henadzi Yakabchuk has been working in the BRANKAMP think tank and developing new ProcessMonitoring systems.

The physicist studied in Minsk, Belarus, and subsequently taught informatics and worked as a software developer, inter alia. „I then received an invitation from the Heinrich-Heine University in Duesseldorf in 1998, which I followed up on and began my postgraduate degree work there in the physics department. I began working with BRANKAMP in 2006 while

still doing my doctoral work“, according to the 43 year old. In the summer of 2008, Yakabchuk graduated as Dr. rer. nat. with an overall accolade of „cum laude“. The father of two particularly enjoys the fact that all roads are open for the development of new systems. Yakabchuk: „I am able to incorporate my full range of knowledge here.“



Monitored by BRANKAMP

Full speed ahead

Turbines are the backbone of the energy supply - no power plant can operate without them. Reliability in the provision of electricity is warranted by their dependability and durability. Siemens AG is one of the leading manufacturers of steam and gas turbines with more than 100 years of experience.

The challenges in power plant construction are growing: power generators are expected to be larger, environmentally friendlier and more efficient. This has an influence on the individual power plant components. As such, especially turbine blades are some of the most heavily stressed of all turbine components. The related loads are both thermal as well as mechanical. Just the same, in order to ensure their absolute reliability and safe operation, all turbine

components must be of the very best quality. For this reason, Siemens AG relies on Process-

Monitoring systems from BRANKAMP for their turbine blade production.



Continued from page 1

Without seals, nothing runs

machinery and even dishwashers. The company enjoys a long tradition, yet is innovative and flexible in providing individually tailored or complete solutions to its customers' needs; and this at the highest levels of quality. „Components related to sealing and vibration technology must function 100% or everything will grind to a halt“, says Guido Will, Director of Quality Management. „For this reason,

we are not just satisfied with compromises, but always demand the best. Quality is the name of the game for us.“ In order to guarantee this quality, the company relies on ProcessMonitoring systems from BRANKAMP. „We manufacture metal carrier components for seals and molded parts using twelve machines - transfer presses and strip stampers - all of which are outfitted with BRANKAMP.

When ordering new machines, we simply order the ProcessMonitoring system at the same time“, according to Will. For the past year, Freudenberg has put its confidence in the PK 4U and the PK 5000 - with success. „In the past, neither feed errors to the circular dies nor the process changes at the individual stations were detected, that led to component stamping faults, deformations and indentations.“

Machinery protection during production

When the tool-making crash comes: Collision avoidance, while saving with BRANKAMP CMS

When it comes to stamping production, ProcessMonitoring is a natural topic – if only to prevent notorious stamping slugs and raise production stroke counts. The use of BRANKAMP solutions in the area of tool and form manufacturing, on the other hand, is less widespread. „And this, despite the fact that many, primarily stamping companies effectually using ProcessMonitoring, either have their own tool-making function or are intensively and successfully cooperating with tool manufacturers“, explains Thomas Krieger from the BRANKAMP sales department.

It is precisely in this area that significant cost reductions are possible through the use of CMS systems, which, of course, also has a positive impact on the competitive position of the respective company, adds Krieger. „The machining production usually associated with tool manufacturing makes collision protection through BRANKAMP CMS systems a very attractive option.“

company, a five-digit figure goes flying right out the window. An effective production process is largely dependent on the timely and qualitative availability of machinery. This is the only way companies can succeed in a highly competitive market. Experts know: Particularly in periods of economic crisis, it is more important than ever to awaken dormant efficiency potential in the production process.

Crisis management: ProcessMonitoring for tool manufacturing

Ultimately, if a multi-stage stamping table is ruined because of a defective tool, it can mean that, for the

Investments should be considered ahead of time, especially against the background that the crisis has yet to reach the tool and form manufacturing sector: „Because good collision management not only ensures your tools are better qualita-

tively. If you have fewer rejects, costs are reduced as well – perhaps you’ll end up being able to offer your tools at lower prices, generating greater related sales volumes.“

Surprisingly, the use to date of collision avoidance systems in this sector remains uncommon. Actually very unusual: „When you just think of how much a demolished tool costs“, Krieger adds for consideration. Damage patterns from various BRANKAMP documented sources provide impressive proof: A demolished tool is not the renowned egg that has to be beaten in order to make the omelette, as the saying goes in America. To some extent, it could signify catastrophic damage. „Sometimes, enormous optimization and saving potential is left abandoned.“

Quantity	Designation	Price	Rebate	Sum Total
				Sum EUR 12,199.52
		Cost 120.70	VAT 19.00% 1,947.82	
		Net Amount 10,131.00		

Conditions : Ex Factory
 Conditions : 14 days net
 of supply corresponds with date on delivery note.

Expensive breakdown: This excerpt from a repair-bill shows how costly a machine-crash may be. After a crash the milling engine, the Z-axis as well as the milling spindle had to be checked by a service-technician – and needed to be partially replaced.



Technology transfer within the company

Innovative thinking: Protect tool manufacturing from damage

Is your production system protected by the most modern ProcessMonitoring system? Very good. But are all aspects of production process really protected? What about tool making? Many machines used in this field are one-of-a-kind and their failure would have grave consequences for the entire production chain.

No matter whether machining or forming production: virtually all processes in the metal processing industry today can be monitored with ProcessMonitoring systems. BRANKAMP is the only supplier offering tried-and-tested solutions for all metal processing sectors.

50,000 applications worldwide

Our background includes well over 50,000 practical applications and more than 30 years of cumulative know-how in the field of measurement and sensor technology. This knowledge makes possible deployments even in the most unusual production operations. But have you given thought

to a technology transfer with common everyday processes? Particularly in the elementary field of tool and form manufacturing? The production process hinges on this area.

Minimize machine outages

BRANKAMP Managing Director, Hans-Peter Schneider, gets right to the point: „If a tool manufacturing machine is damaged to such a degree that it can no longer be operated, everything goes idle. In some cases, the entire operation must be shutdown.“ For this reason, according to the BRANKAMP specialist, tool making, specifically, must be a top priority for every production manager – and the

opportunity taken from that point to shorten downtimes or even to prevent them altogether.

Trend toward complete equipage

One thing is clear: The competition never sleeps. „Machine availability, quality, damage control during malfunctions - these are the factors that production operations can no longer afford to ignore, especially during a period of economic crisis“, says Schneider. „More and more companies are not just equipping their individual machines with ProcessMonitoring systems, but are equipping their entire production facilities, as well.“

What actually are ...

... RFID?

Positive identification of objects without visual or physical contact is possible without a problem using RFID; Radio Frequency Identification Technology. In addition to the recognition and localization of objects, RFID also represents automated data recording and storage.



Information is transmitted and detected via radio. Many branches of industry, be it commercial, logistics or production, anticipate considerably more economical processes through this innovative technology. BRANKAMP has developed a special RFID card, on which the operator's work data is stored. When he identifies himself with the RFID card in the ProcessMonitoring system, the individual work desktop is automatically loaded with the previously selected settings. This includes language changes, the locking or release of setting functions, as well as options for optimum color adaptation and settings for left-handed or right-handed operation. RFID enables personal access administration. Operating data logging is also possible using the RFID card.

Dr.-Ing. K. Brankamp System Prozessautomation GmbH, Max-Planck-Str. 9, D-40699 Erkrath

BRANKAMP GMBH, GERMANY

Phone +49/ 211/ 25 07 60
 Fax +49/ 211/ 20 84 02
 eMail bpd@brankamp.com

BRANKAMP S.R.L., ITALY

Phone +39/ 039/ 60 81 917
 Fax +39/ 039/ 60 85 207
 eMail bpi@brankamp.com

BRANKAMP INC., USA

Phone +1/ 617/ 492 16 92
 Fax +1/ 617/ 497 56 75
 eMail bpa@brankamp.com