BRANKAMP
THE PROCESSMONITORING COMPANY
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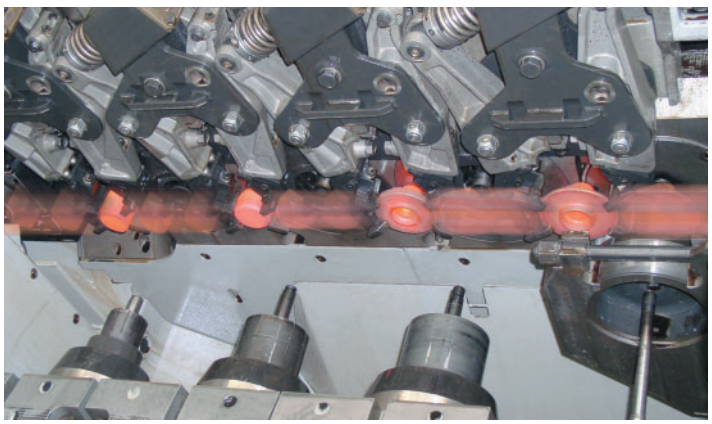
BRANKAMP: The biggest monitor of hot-forming plants in the world

Hot stuff

The manufacture of brake, clutch and steering components for the automotive industry is a complex process. To achieve the greatest possible quality and safety, companies world-wide use automatic multi-stage presses. On these, the heated raw steel is pressed into its final form by undergoing a number of different forming stages. The biggest unit currently available, the HM 75 XL from the Swiss manufacturer Hatebur, applies a total pressing force of up to 18,000 kilonewtons during this process.

"Automatic forge units are capital-intensive manufacturing plants which frequently prove to be bottlenecks in the system. For that reason, high machine availability is very important. Hatebur and BRANKAMP have developed an adapted pressing force monitoring system especially for the Hotmatic Warmformer," says Dr. Thomas Terzyk from PROKOS, a BRANKAMP subsidiary. Companies around the world are putting their trust in BRANKAMP ProcessMonitoring systems. The Erkrath-based company monitors around 50 Hatebur units around the world, using PK5000, PK6000 and PK6000i systems.



Production underway: the automated multi-stage press from Hatebur

This makes BRANKAMP the biggest monitor of hot-forming plants in the world. The three automated HM 75 type multi-stage presses currently in use in the world are

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The BRANKAMP CMS ProcessMonitoring system, in use on a horizontal Mazak FH 5800 processing center.

The special issue *page 3*
Absolutely accurate, and with true tracking precision (part 2)

EuroBLECH 2006

Sheet metal summit in Hanover

The BRANKAMP presence at this year's EuroBLECH sheet metal working technology exhibition in Hanover (24-28 October) featured four new innovative products simultaneously – UltraEmission, EasyVision, FactoryM and the PK4U. "Punching slug recognition in combination with cost-favorable devices like the PK4U was a real hit," said Hans-Peter Schneider, authorized representative for BRANKAMP. Equipped with highly-sensitive sensors, high-performance evaluation procedures and a wealth of experience, the BRANKAMP "slugbuster" team out to eradicate this annoying punching waste.

News

BRANKAMP SUPPORTS SCHOOL IN SLOVENIA

The ProcessMonitoring specialist is supporting the mechatronics engineering school in the Slovenian town of Celje. To enable these prospective engineers to learn more about BRANKAMP engineering, the company has already installed a B400. In addition, the school is getting FactoryM together with an IMC box and terminal software.

OVERSEAS VISITORS

The two Canadian BRANKAMP agents, Mitchell Gordon and Amir Walden, visited at the end of August for a quick refresher to top up their expertise in punching and cold forming. Hans Peter Schneider and Axel Terhaag trained the two Canadians at the company's head office in Erkrath.

CAR PRODUCTION UP WORLDWIDE

Global car production is up by six per cent in the first half year 2006 over the comparative period in the previous year, rising to 35.4 million vehicles. The international organization of motor vehicle manufacturers OICA (Organisation Internationale des Constructeurs d'Automobiles) is estimating growth for the full year 2006 of well above five per cent, to 70 million vehicles.

QUOTE OF THE MONTH:

"The best way to predict the future is to invent it".

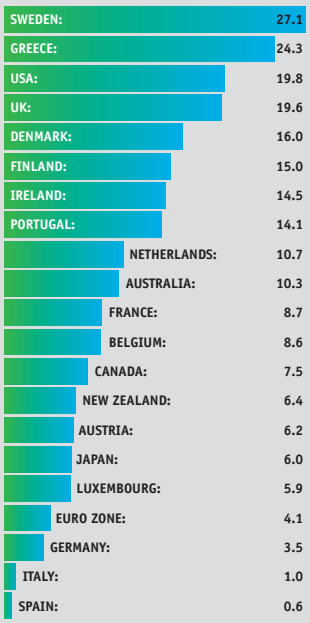
Alan Kay,
US computer specialist

News

WIRE CHINA 2006

Wire China has become an established event. In Shanghai, 923 exhibitors from China and 31 other countries presented their product innovations. BRANKAMP was there too, exhibiting its ProcessMonitoring systems to the Asian market. "It was a great trade fair. We managed to make plenty of new contacts," said Gerd Köster (photo), who was in China for BRANKAMP. At this, the second wire China event, machine manufacturers were also exhibiting their machines directly in greater numbers too.

FIGURE OF THE MONTH:
Rise in real wages, as an international comparison (1995-2004) in per cent:



Source: VIK

In Sweden, real wages rose between 1995 and 2004 by a total of 27.1 per cent. In second place comes Greece, with 24.3 per cent. In Germany, employers only paid out 3.5 per cent more in wages in 2004 than in 1995.

Monitored by BRANKAMP

Well-adjusted!

Anyone who travels a lot on business by car knows the problem: tenseness in the neck and shoulder area, and cold feet. The correct adjustment of the car seat helps in preventing such symptoms.

Tenseness and ice-cold feet can make the car journey into something of an ordeal. To spare your back, neck etc. from being affected so much, even on longer journeys, experts recommend adjusting the back support on the car seat to form a 110° angle.

Enjoy your trip at 110°

On most car seats, the back support is adjusted using a side-mounted wheel. In order for the seat to remain in the desired position, the locking mechanisms must function perfectly.

With its innovative ProcessMonitoring systems, BRANKAMP monitors the production of these toothed wheels. Leading well-known car seat manufacturers are relying on the BRANKAMP PK6000 system for manufacturing their locking mechanisms.

In-Process monitoring with BRANKAMP

Slugbuster: on the hunt for slugs

Producing more, and more quickly, whilst maintaining consistent high quality – this is the challenge facing companies. For punching, the BRANKAMP rapid intervention team known as the "slugbusters" offers comprehensive protection against loss of quality. Using innovative systems and a wealth of experience, they are out to collar the slugs.

On punching operations, lifting slugs are a frequent interruption to the production flow. The higher the stroke rate, the more likely it is that this phenomenon will occur. This is why many blanking presses operate "with the handbrake on". This punching waste not only impairs the quality, but also increases the risk of the tool breaking. Random quality controls cannot offer comprehensive safety, because punched parts with stamped slugs generally occur by chance and in isolated instances. An elaborate part-by-part check drives costs up to the point where competitive production is no longer possible. This is where BRANKAMP's "slugbuster team" steps in, offering high-performance in-process quality control and avoiding expensive follow-up costs. Using the Ultra-Emission sensor system and the PK 4U systems, slugs are already identified during production. The direct route to problem-solving: slugbuster@brankamp.com.

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Hot stuff

also monitored using "made in Erkrath" ProcessMonitoring. "An automated multi-stage press like that costs around ten million euros. If the press goes down, the result is a massive economic loss," says Terzyk. The BRANKAMP systems support the operator even when setting up the tools. As Terzyk says, "Through optimal setting of the process parameters, undesirable machine downtimes are minimized from the outset. In addition, the plant is protected against permanent overstress."

Process-monitoring on thread rolling machines

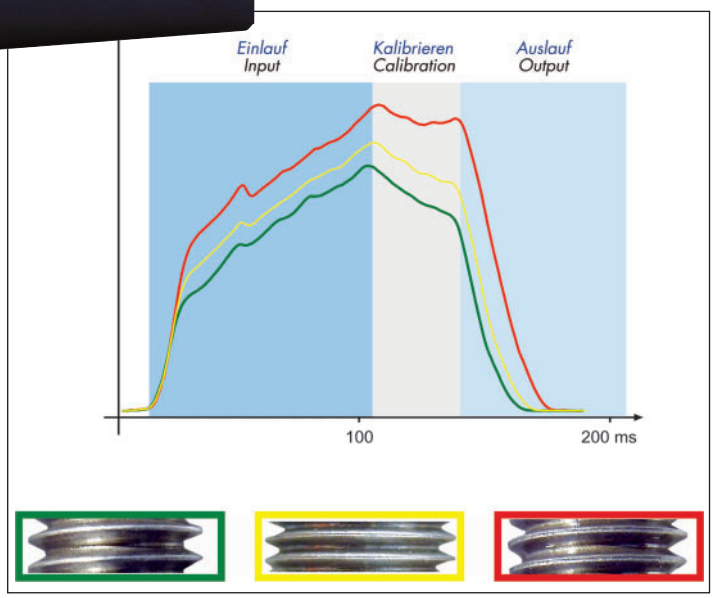
Absolutely accurate with true tracking precision (part 2)

Together with the machine manufacturer E.W.MENN, BRANKAMP has developed a new procedure for monitoring thread rolling machines. As a result, unnecessary stresses on the machines caused by unmonitored set-up and production phases are now a thing of the past. Even inexperienced operators can optimize the machine adjustment using the Process-Monitoring system.

Using innovative BRANKAMP thread roller monitoring, the thrust-carrying member sensor can for the first time ever be calibrated. The operator can then read off the absolute rolling forces for the feed and output side to top and bottom. As a result, adjustment errors during the set-up phase, and the associated increased machine wear, can be reduced to a minimum.

True tracking precision

A further critical point when setting up the thread roller is accurate alignment of the tracking between the fixed and the moveable roll jaw. Even if this alignment is still accurate when the machine is static, it changes as soon as the thread roller is in continuous use. Without ProcessMonitoring, the operator must carry out follow-up tracking adjustment, in a time-consuming process. BRANKAMP has developed the tracking sensor specifically to address this problem.

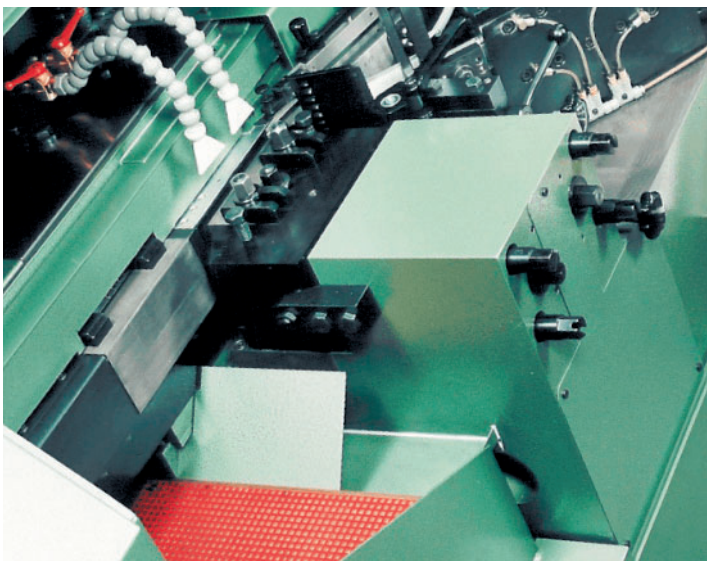


The patented sensor records precisely the tracking between the fixed and the moveable roll jaw, and transfers the data to the monitor. The operator can immediately see in which direction he needs to adjust the tracking. This means that even inexperienced operators can achieve optimal set-up of the roll jaw tracking.

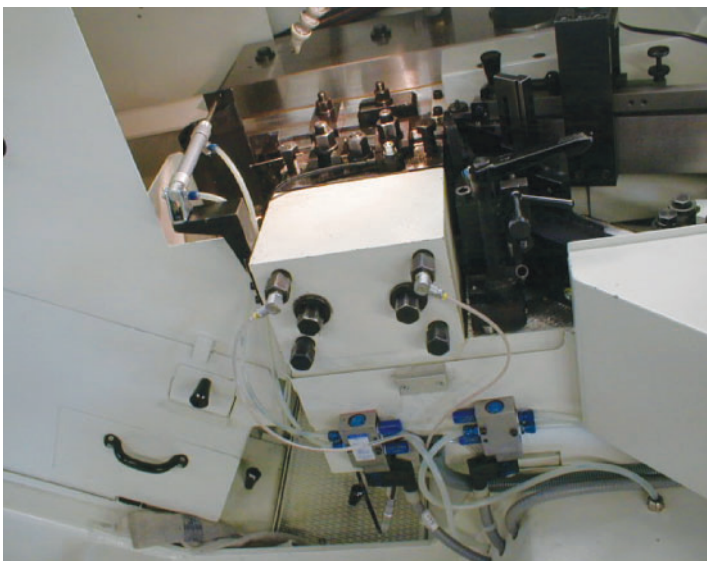
Comprehensive practical tests

The two BRANKAMP innovations have proven their worth in exacting and extensive practical tests. The Erkrath-based company is now offering complete solutions for thread rolling in the form of its PK 4U and PK 6000 models.

If you are interesting in reading Part 1 of this article, please contact us on + 49 (0)211-250760



Thread roller with adjustment screw



Sensor installation by BRANKAMP

ET 500

There is space – even on the smallest machine

In modern manufacturing, every centimeter of space is used. The BRANKAMP ET 500 – the innovative front-end system of the ECO 500 – takes this into account: the operating terminal and the engineering are separated from one another. It is only the small ET industrial terminal which needs to be machine-mounted.

During cutting processes in particular, monitoring of production processes is especially important. It is the only way to shorten equipping times, monitor tools and thus protect machines. That is why BRANKAMP has developed a forward-looking solution – the ET 500.

For this, the ECO 500 is built into the switching cabinet as a base module. On the machine itself, only the space-saving ET industrial terminal is installed. The operator can control the ECO 500 technology via the ET's touchscreen interface. The advantage of this is that the ET offers a significantly bigger and thus more comprehensible user interface, with its 10.5 inch monitor.

All the functions of the BRANKAMP ECO 500 system are therefore available to the operator in color.

These include:

- Crash, break, trend and operating interval monitoring
- Display of process data for each channel
- Multi-channel display
- Comprehensive counter functions (e.g.: order counter, shift counter etc.)
- Process-quality factor display
- Automatic machine stop in the event of process deterioration
- Recording and transmitting production data
- Auto-test
- Envelope curve analysis with dynamic limits
- Online help via modem

User-friendliness

Global by design

Using the new RFID technology which is integrated in the BRANKAMP PK6000i system, the operator can read off all production data using a mobile reading device. But the RFID chip can do a lot more than that. Used as an ID chip, it recognizes the working language of the operator using the device at that moment and activates the respective language in the ProcesMonitoring system.

For example, if an operator from Portugal is beginning his shift and logs on with his ID chip, the BRANKAMP system automatically switches to Portuguese in the language selection. This is made possible using an antenna integrated in the RFID chip which sends the data wirelessly to the ProcessMonitoring system. If a German, Spanish or French operator begins work after the shift change, the identification chip again sends the corresponding data to the ProcessMonitoring system. The respective working language of the operator is activated immediately. Operating errors caused by language difficulties are thus made a thing of the past, thanks to the combination of RFID technology and BRANKAMP systems.

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