



Upturn in America

US economic trend recovers quicker than expected / order bookings in industry increasing

"The mood in American companies has changed", says authorised officer, Hans-Peter Schneider, of BRANKAMP, taking stock after touring the automobile region of Detroit in the US state of Michigan for several weeks. "After a dull phase, we now once again see an increase in investments in promising areas such as process monitoring."

The increased demands of the US industry is said to play an important role in this: "Here, too, the focal point is more and more the issue of process reliability. This, for example, is why ever more American automobile manufacturers demand that their suppliers use process monitoring systems." And according to Schneider, this also applies to other branches, such as the production areas of punching, machining, and cold forming. Thus, in the past few weeks, Textron, MNP Corporation, and Pratt & Whitney, for example, have decided on purchasing new BRANKAMP systems.

The fact that this sector trend towards new investments is not merely an exception is also evidenced

by the figures presented by the economists in regard to the overall situation. It is obvious that the United States have managed to climb out of the economic valley. In May, the US industry was able for the third time in a row to increase the order bookings.

The Department of Commerce has reported a plus of 0.7% as against the previous month.

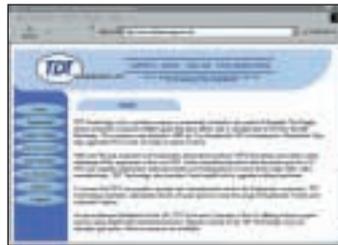
Even the National Association for Business Economists, whose 30 economists present regular forecasts of the economic growth in America, is now anticipating a clear recovery following a long barren period.

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New partner in Great Britain

BRANKAMP will now be represented on the British Isle by TDT Technology Ltd. The team of ten of the company founded in 1993 and seated in Rugby near Birmingham will be responsible for looking after any BRANKAMP customers.

Some of the staff at TDT Technology have gathered experience in the automation sector for around 30 years. The British company is certified in compliance with ISO 9000.



www.tdt-technology.co.uk

The special theme

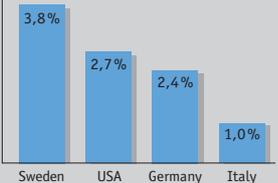
Process Monitoring: The Magnifying Glass for Production

Dipl.-Ing. Hans-Peter Schneider

Process monitoring systems are the key to optimization of manufacturing operations. They support the worker in any and all situations and actively help in continuously improving quality. At the same time, they prevent costly machine shutdowns and tooling damage.

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Investment for research & development in percent of the gross inland product



Source: I/W Cologne

NEWS

MACHINE TOOL INDUSTRY: PROMISING FORECAST

Despite the economic downswing, the machine tool industry is expecting the second best result in history in 2002. The companies, however, do anticipate a decrease in production by 10 % to 9 billion Euro.

OPEL WITH NEW QUALITY MANAGEMENT

The Opel-Motorenwerk in Kaiserslautern is now certified according to "ISO/TS 16949". The international quality system satisfies the requirements set forth both for the European and the North American markets. The plant is now trying to procure contracts also from outside of the GM combine.

ENGINE ALLIANCE FOUNDED BY AUTOMOBILE MANUFACTURERS

As from now, Daimler-Chrysler, Hyundai and Mitsubishi will develop and manufacture gasoline engines in a joint venture in the USA. With some 1.5 million units, these joint venture engines will belong to those most commonly used in the automobile industry.

QUOTATION OF THE MONTH

>>Anything the customer cannot see, hear or touch, is a waste of money<<
Bob Lutz, Chief Development Engineer, General Motors

NEWS

ZF GROWS CONTRARY TO GENERAL TREND IN THEIR BRANCH OF INDUSTRY

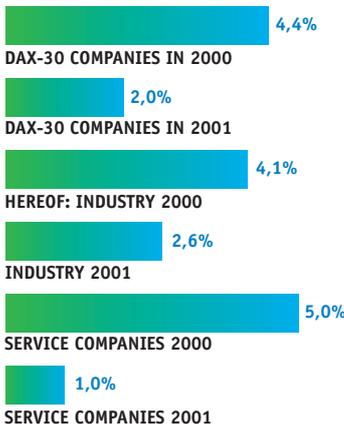
In 2001, ZF Friedrichshafen AG, the worldwide active component supplier to the automotive industry, has achieved a growth in turnover against the general negative economic trend in important customer trades. Turnover increased by 7 % to 7 billion Euro. The number of employees increased by 2 %, and the investments amounting to 9% of the turnover again reached a historical peak in ZF.

BEST PLANT IN 2002

The new plant of DECKEL MAHO Seebach GmbH belonging to the Gildemeister group of affiliated companies is the overall winner of the German-French competition "The Best Plant - Industrial Excellence Award 2002". Setting out from most modern management and production strategies, the Seebacher people today are building four times as many machines as in 1995. With Euro 328.000 the turnover per staff member could be more than doubled.

FIGURE OF THE MONTH: NET YIELDS LESS THAN HALF

Profit after taxes in percent of turnover:



Source: JW Cologne

There has been a dramatic setback of the net yields of German companies. This is the conclusion drawn by the Institut der deutschen Wirtschaft (Institute of German Economies) in Cologne.

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The economists have therefore adjusted their own prognosis upwards, from a growth of 1.5% to 2.8% in the current year. For 2003, the experts anticipate that we will see growth in the regi-

on of 3.7%. In these parts, too, the swing of the trend barometer of America has had initial positive effects. In the first quarter, the economic situation in Germany may have developed in a somewhat restrained

manner, recording a plus of 0.2%. But even now the experts anticipate that the pace of growth in the Euro zone in the third quarter will accelerate. This is suggested by several early indicators.



Hatebur relying on BRANKAMP

As of now, Hatebur, the Swiss machine manufacturer, will equip its Hotmatic multistage presses with process monitoring systems as standard. Herein, BRANKAMP is the solution partner selected by Hatebur.

Automatic forging plants are capital intensive production facilities frequently having a bottleneck character. Accordingly, the achievement of a high machine availability will be of paramount importance. "In due consideration of this objective, we have developed a tailor-made pressing force monitoring system for Hotmatic hot-forming equipment in cooperation with Hatebur", says Franz Saliger, holding a general power of attorney at BRANKAMP.

Sensors and sensor locations for recording the pressing forces have been duly tuned. The process monitoring system for the Hatebur hotforming equipment is based on the BRANKAMP PK 5000 / 6000 series of models. "The system will support the operator already during tool-

setting and in process control", states Saliger. Unintentional machine downtimes will be restricted to a minimum by an optimal setting of process parameters right from the beginning.

In addition, conforming parts will be produced with minimum pressing force protecting press and tooling and resulting in an optimal service life. Important in practice: The process monitoring system will also display the trend path of pressing forces. This trend path will show the process history similar to a tachograph. In this way, any

arising process changes may be recognized and corresponding counter-measures may be initiated at an early stage. When a defined permanent load limit is being exceeded for a short time, the BRANKAMP PK 5000 / 6000 will generate a warning. Simultaneously, the load encountered will be stored with date and time in a file, i.e. the so-called overload protocol. The forging facility will not be shut down unless the permanent load limit is being exceeded permanently (as a rule for more than 15 strokes).

Upshot: The Hatebur hot-forming equipment is now disposing of an optimal process monitoring and process documentation system. It will help in protecting press and tooling from overloading and permit stroke-synchronous, i.e. online monitoring of the process. The comprehensive documentation on machine loading, process problems encountered and process stability measured may then be used for offline analysis and optimization of production.



The service engineers of Hatebur were given a training to become familiar with the BRANKAMP systems, in order to ensure unobjectionable commissioning thereof. The photo shows the Hatebur service engineers with BRANKAMP staff member Walter Nieland in front of the Hatebur company building.



Process Monitoring

The Magnifying Glass for Production

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Further information on the optimal use of the systems will be contained in the second part of our article series.

With the process monitoring system the worker is given the opportunity "of looking into" the process. The system supplements the classical process monitoring by the worker (observation, hearing, measuring) by an objective instrument supplying more precise information on process quality (PQ). Due to the sensibility of sensor technology the worker will be in a position to recognize process variations earlier and/or more precisely than without such sensory analysis.

It will be possible for the worker to watch the operations between workpiece and tooling. In case of a consistent PQ factor the worker can set out from a constant process whilst a varying or fluctuating PQ factor will be an immediate indication of process variations.

FAST INTERVENTION POSSIBLE

Due to the quick perception of process problems the worker will be in a position to react just as fast. In addition, the trend display of the PQ factor will facilitate the recognition of process variations and/or changes. Herein, the time factor of such variation will also be important for the

worker (gradual or fast change of PQ factor).

The PQ factor will permit the worker to find out which tool and/or which tool setting will result in the maximum loading of the machine. Herein, it will be possible for him to compare the various tool settings. Should the worker already have values from his past experience, he may use them for optimization. Gradual changes will become evident when observing individual tools. This, in turn, will permit the worker to obtain indications as to tool wear so that the tooling concerned may be replaced in due time.

Using the classical elements of process monitoring it will frequently not be possible for the worker to recognize trends within his process. Thus, for instance, it will be extremely difficult to become aware of gradual process changes by just hearing. The PQ factor trend indication will make it even easier for the worker to recognize changes, since the previous PQ factors will be compared with the actual one.

OPTIMAL TOOLING PROTECTION

The PQ factor supplies the worker with objective information as to the relation between tool and workpiece so that he can optimize the tool settings. Optimal tool setting will reduce wear and the risk of tool failure.

From his experience, the worker will know the maximum PQ factor which may not be exceeded for a specific tool. When this PQ factor is attained, the worker may intervene in the process and thus prevent damage.

To be continued in the next BRANKAMP Journal.

On the Road

Brazil, Japan, Russia - Walter Nieland has seen a lot of the world since his employment as a service engineer with BRANKAMP started in 1982. After a one year's interruption, Nieland joined BRANKAMP a second time in 1992, and today he is the expert for process monitoring systems in the fields of presses and forming facilities. In the meantime, Nieland certainly will have installed, serviced and modernized several thousand BRANKAMP systems all over the world, especial-



ly since the 48 years old Nieland is on the spot on the customers' premises almost daily. What does actually count there? "Talent for improvisation, flexibility, but also punctuality are important." The father of a family knows his branch of business already since his apprenticeship with Hilgeland, a machine builder in Wuppertal. And even in his leisure time, he can hardly resist doing handicrafts with screws and nuts. At home in Sprockhövel Nieland most of all loves to refurbish old tractors.



hall 9, stand F16
22.-26. oktober 2002
in Hannover

Welcome to EUROBLECH
Please, visit us.
We hope to meet you.

Process Monitoring with the BRANKAMP PK 6000

The BRANKAMP PK 6000 constitutes the optimal solution for process monitoring on presses, punching and stamping machines as well as rolls. It combines absolute top-class technology with a maximum of operator convenience.

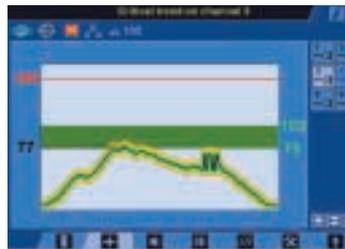
Today, the factors of quality and speed are more important than ever before, and process monitoring is the key to gain the decisive lead under the present conditions of severe competition. Whether during set-up, operation or shutdown of a machine - the worker is given an optimal support in any phase of the process by process monitoring since he will continuously be informed of all actual operations of his equipment.

Thus, for instance, the user will be informed of the actual conditions (OK, warning or stop) of the active monitoring processes (maximum force, envelope, trend and acoustics) in compressed form by the monitoring lights.

In addition, the BRANKAMP PK 6000 will record all downtime



reasons with date, time and tool number. When monitoring limits are exceeded, this will be recorded for a detailed fault analysis. Furthermore, it will be possible for the operator of the BRANKAMP PK 6000 to have all monitoring processes displayed at a glance.



Summarized below are the most important features of the BRANKAMP PK 6000:

- Quattromatic envelope process satisfying highest quality requirements

- Large tool database with reference curves stored for the optimization of setup times
- Comprehensive stop protocol for a thorough analysis of shutdown reasons and main problems
- Efficient early warning system with high-capacity database
- Sitemap presenting all functions at a glance
- Favourite Keys for frequently used masks
- Networking capability in Ethernet TCP/IP networks
- Highest reliability by latest Windows Embedded NT operating system.

One of the most important prerequisites for the optimal application in operation is maximum operator convenience as offered by the BRANKAMP PK 6000. With this type of equipment, an intelligent autopilot function will facilitate equipment operation even further, and the BRANKAMP PK 6000 is additionally equipped with a large-size 12 inch easy-touch screen.

Professional Claim and Complaint Management with Dr. Quality[®] RM

As of this date, the approved management tool Dr. Quality RM will be available in its new version 6.29. The software permits fast and professional handling of claims and complaints frequently expensive and time-consuming hitherto. Statistics on the frequency of causes or the quality of a specific product may be retrieved by simply depressing a key.

In addition, the following novel functions are included in Version 6.29:

- Distribution of claim or complaint reports and 8D reports per eMail or fax
- Transfer of claim or complaint data to 8D reports



- Comprehensive new possibilities of selecting and evaluating your claims and complaints
- Clear representation of costs and quantities affected by claims and complaints
- Export of data in EXCEL
- ppm statistics

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