



Collage: Ukrainski

More productive due to machine atlas

by Dr. Jörn Herold

Benchmarking project: suppliers see 10% to 20% increase in productivity

The increasingly fierce competition among major industrial manufacturers on the international market is felt even by their suppliers in the form of mounting cost pressure. Due to this development suppliers are forced to continually improve their productivity. Now various studies have shown that considerable productivity reserves lie dormant in numerous small to medium-sized companies – in particular as regards the use of their machinery and plants. An important step towards improvements is by recording

failure data and their causes, and eliminating stoppage times. While many companies have records of the utilisation ratio of machines, there are no objective standards. And yet it is here in particular that considerable differences arise. Thus, a study carried out among industrial suppliers brought to light that the average utilisation ratios during the actual shifts worked on automatic punching machines show considerable deviations, with figures between 11% and 76%.

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Editorial

Innovation and communication

by Hans-Peter Schneider (MEng)

„Innovation is the future“ - this is true today more than ever. Hearing this as an engineer, we first think of technologies and products. However, innovation is increasingly important even in the communication sector. Therefore, the BRANKAMP Journal is now available as a PDF file, while voice reports on topical issues can be retrieved from our home page (see p. 3). Also, as of this edition, you will find that the layout of the BRANKAMP Journal has been totally revised. However, above all in future, we wish to increase our dialogue with you. Therefore, the BRANKAMP Journal will subsequently be wide open to you - as a platform for important topics arising in our industry. Innovation is the future!

The special topic

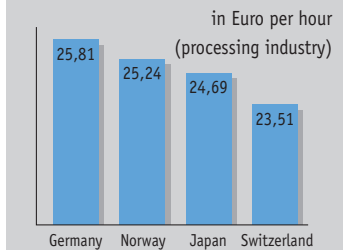
Better quality through process monitoring

by Hans-Peter Schneider (MEng)

Whether it be in reshaping, punching, pressing, or metal cutting - process monitoring is the key to an optimised production. Process monitoring helps the worker in every phase: from the fitting of the machine to the observation of the production process to the quick stop in case of the threat of

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Labour costs in the four most expensive countries in 2000



Source: IWK Köln

News

GERMAN CARS

IN DEMAND IN THE USA

In the USA, Mercedes and BMW ended the year 2001 with new sales records. While DaimlerChrysler was able to sell 206,638 vehicles in the previous year (+ 0.5%), BMW of North America even managed to increase its sales by 12.5% to 213,127 cars. At the same time, Porsche was also able to record a gain of 2% (to 24,143) and Audi of 3.6% (to 83,283).

NEW EMO COMMISSIONER

When the EMO opens its doors in Milan on 21 October 2003, Pier Luige Streparava will be looking back on many months of exhausting, hard work. After all, as the new Commissioner, the 59-year-old head of the Italian automobile supplier of the same name is responsible for the organisation of this international sector meeting. His intentions are to attract up to 1,500 companies in the product engineering sector as exhibitors to the North Italian metropolis.

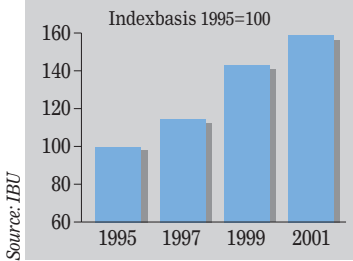
QUOTE OF THE MONTH

„I simply cannot understand why such extraordinary demands for higher wages should be taken seriously at all.“

Ottmar Issing, Chief economist of EZB on the IG Metall (German engineering workers' union) push

News

**Production index
Sheet metal forming**

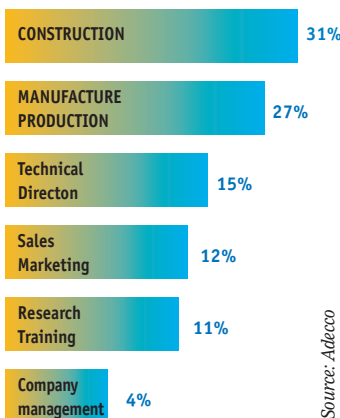


FORD FOCUS AHEAD

The Ford Focus is the new leader in the Automobile Report 2002 of the German Technical Control Association (TÜV). With a fault rate of only one per cent, it managed to overtake its Japanese competition after three years as the car with the least faults. On the whole, for its current study, the TÜV analysed 179 types of vehicle in around seven million major tests between the summer of 2000 and the summer of 2001. Using BRANKAMP devices in its production, Ford presented the Erkrath-based company with the „Q1 Award“ for quality in December.

**FIGURE OF THE MONTH: 18,645
MECHANICAL ENGINEERS
WANTED**

*Job index
Wanted for what?*



There are more jobs for mechanical engineers available than can be appreciated by companies.

**„We do the measuring.“
RPC Bebo Plastik makes optimal use of BRANKAMP technology**

RPC Bebo Plastik in Bremer-vörde uses nine BRANKAMP process monitoring systems by now. The company with a staff of 420 uses these devices to protect itself against expensive tool breakages. The Brankamp Journal spoke to Joachim Stabel, 49, Departmental Head of Deep Drawing.

BRANKAMP Journal: The measuring points for the devices are always chosen by you – why?

Stabel: Because we know the machines like the back of our hand, that is our know-how. Of course there is also that certain modicum of personal interest and thirst for knowledge. Only in this way can we ensure an optimal use of the devices.

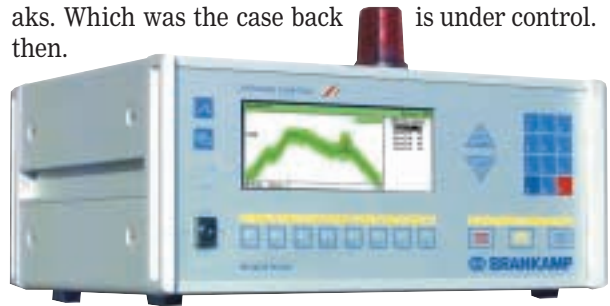
BRANKAMP Journal: What induced you to use process monitoring devices in the first place?

Stabel: That was triggered by a damaged tool which cost us several 10,000 Euro. We produce plastic containers in what is known as the compound die process. This means, we have a blanking punch and a die-plate that need to make a clean cut towards each other. If there are any material deposits, it can happen that one of the filigree-worked blanking punches breaks. Which was the case back then.

One of our new employees had used the BRANKAMP devices in another factory, and so we tested them. That is what got us started.

BRANKAMP Journal: From your point of view, have the devices proven their worth?

Stabel: Yes. For example, we use a machine with a very complicated tool. The maintenance measures for it back then assumed such proportions that you could not really talk about production anymore. Now that is under control.



machine atlas

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Against this background, benchmarking can be a way of being better able to determine one's own position and to make visible whatever potential there may be. This was also the starting point of an foundation project handled by the Institut für Produktionsplanung und Produktionstechnik (IPP – Institute of Production Planning and Production Technology) in Erkrath. This project has led to a „machine atlas“ based on a pool of data on the stoppage behaviour of certain machines in small to medium-sized companies.



The data come from a combine of 20 industrial companies in the components supply- ing industry that predomi-

nantly use machines for metal working. The basic data were recorded by means of an EDP-aided system for the automatic recording of stoppage data. The evaluation including an analysis of weak points and improvement measures based on them was undertaken by the research institute in workshops with the individual pilot companies.

In this way, the companies involved managed to increase their productivity by 10% to 20% - and that „partly with very simple measures“, according to Project Manager Dr. Jörn Herold.

The „machine atlas“ is available from the Institut für Produktionsplanung und Produktionstechnik IPP GmbH.

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News

AUDI WITH RECORD FIGURES

Last year, Audi turned over 22 billion Euro, 10% more than in 2000. The VW subsidiary was also able to record a gain in deliveries by 11.1% to 726,134 vehicles. These excellent results also led to a slight increase in the employment figures.

GERMAN PATENT RECESSION IN THE USA

Last year, German businesses did not feature in the list of the top 15 companies to apply for patents in the USA. The best German company was Siemens AG, with 817 patents ranking 17th. The clear leader in this field was the computer giant IBM with 3453 applications.

QUOTE OF THE MONTH

„A decision must not cause greater problems than it solves.“

Hans Küng (philosopher)



Process monitoring: the speed of production

Better quality through process monitoring

by Hans-Peter Schneider (MEng)

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damage to the machine. As of this edition, the BRANKAMP Journal is starting a multipart series on the optimal use of process monitoring systems.

Every machine tool is a complex construction carrying out the actual processing work by means of one or several tools. In the end, the quality of the product is determined by the behaviour of the tool and the workpiece. Any influencing quantities affecting the machine (or the process) will in the end be seen in the process quality.

Thus, the process is affected by changes in the machines, in the tool, the environment (temperature), etc. Only if this process has defined courses, will the product quality meet the requirements. Intentional or accidental changes to these influencing quantities will have an effect on the process quality.

BRANKAMP process monitoring devices are fitted directly to the machine to record a process quality factor (PQ factor).

This factor is displayed on the devices.

To monitor a process, certain limits need to be set, with the process monitoring device basically initiating a warning or a stop. In the following, the process monitoring sector will be dealt with in more detail.

Process monitoring without sensor technology

The worker keeps an eye on the process according to his experience. In so doing, he visually observes the process. Due to his experience, he knows that he will be able to hear certain disruptions and, in the end, by measuring the workpieces, draw conclusions about deviations in the process. The more today's machine tools are enclosed, the less he is able to watch or hear anything directly. He is therefore fully dependent on trouble signals or on the results of his measurements.

Process monitoring with reactorics

By means of sensor technology recording the course of the

process between the tool and the workpiece, the worker is able to watch the process purposefully. The relevant quantity will, in the following, be described as the PQ (process quality) factor. The more sensitive the sensor technology and the more intelligent the measuring parts are, the better and more „accurate“ is the PQ factor. In addition, the worker will, in the course of time, learn to assess the PQ factor correctly. The standard display shows the current process factor, the highest PQ factor thus far, and a limit set by him. He can then draw the appropriate conclusions from observing any changes and intervene or optimise.

Displaying suitable factors for the process provides the worker with considerable advantages with respect to the optimisation of the process and the ability to influence the costs. With the PQ factor, the worker, for the first time, has an objective measured variable by means of which he is able to assess the process quality.

Continued in the next BRANKAMP Journal

The Spain expert

Juan De Cruz looks after the 60 Spanish customers of BRANKAMP in the punching and cold forging areas. The graduate in business economics, who completed his studies bilingually, has been employed with BRANKAMP since May 2000. Currently, the 24-year-old with Spanish roots is busy with preparations for the Bial trade fair in Bilbao where BRANKAMP will be represented by its local sales partner. Recently, De Cruz, who has a definite gift for languages, has had to handle one more language: He is also the contact for the French customers in the punching sector.



Voice reports

In the last few weeks, BRANKAMP has offered an innovative form of information transfer on its web pages. The latest news from the company are now available directly from the company management. For BRANKAMP backs voice reports, i.e. audible Internet, from the agency, enterpress. Among other things, the first interview will be about the Q1 Award presented to BRANKAMP by Ford Motor Company in December. Voice Reports fulfil the claim that despite all the technology, the people behind a company are becoming increasingly important. To see – and hear – for yourself, visit our website at

www.brankamp.com/sprachauswahl/deutsch/Aktuelles/Q1_award.html

Exhibition- Highlights



The BRANKAMP stand at the wire 2002 exhibition



Discussions on the stand in a relaxed atmosphere



aGreat crowds attracted by the novel developments



aSingle-button control: BRANKAMP have got the knack of doing things



The focus of attention: the new PK systems



Convincing presentation by BRANKAMP



The wire 2002 in Düsseldorf, the leading international fair for the wire and cable industries, has been a full success for BRANKAMP. During the five exhibition days, numerous novel developments were presented by process monitoring specialists.



Quite a few visitors were particularly interested in the new PK series process monitoring systems presented on the fair for the first time. Above all the BRANKAMP PK 6000 (see last page) repeatedly were in the focus of the many individual discussions.



In addition, BRANKAMP has fitted a lot of its appro-

ved systems with the innovative single-button control. Herein, all functions



may be initiated via one single button similar to the spherical M 400 forerunner model. Dead easy operation of the equipment will thus be possible. The operators have the possibility of navigating through the various masks by simply turning and pressing the button.

Also the latest software products such as the online production data acquisition system eR5 were presented to the visitors on the BRANKAMP stand.

BRANKAMP eR5

Online production data collection

Simple, meaningful, economical

BRANKAMP eR5, the newly developed online production data collection system based on the latest technologies, actively support the works manager in managing the plant economically and in the best possible way as regards technology.

The advantages are obvious:

- improved transparency of the operating processes
- quicker processing times
- better use of available capacities
- better deadline and cost control in connection with order progress and historical costing
- generally improved ability to obtain information

In short, BRANKAMP eR5 helps save money and support business decisions by means of sound data. Looked at in this way, it should not be missing in any company with a modern management.

BRANKAMP eR5 is easily installed without the requirement of major investments or an additional burden on the staff, and yet automatically delivers elementary basic data on the production in the form of clear, easily understandable graphics:

- machine running
- machine stopped
- production quantity per day/week

BRANKAMP eR5 only requires a piece number impulse from

the machine connected to a MC (machine counter) box that is able to manage up to eight machines in parallel.



The MC box is directly integrated into the company's own intranet. The software for the administration and evaluation of the online production data can be installed on an existing or an external server. Thus the data can be retrieved via the intranet or the Internet at any time by means of a password.

The intelligent alternative:

Industrial PC terminals



BRANKAMP has extended its successful series of industrial PC terminals by adding the

terminals GT and GT C100. The devices in a robust casing are specially designed for use in tough surroundings such as a production hall.

Both systems combine the latest PC technology (in the standard configuration including Windows operating system) with a user-friendly interface. The GT C100 system comes with a TFT screen and is controlled via a modern keyboard.

The GT system is equipped with a touch screen reacting to the slightest touch, while at the same time being up to four times more breakproof than conventional touch screens.

The BRANKAMP products are certified pursuant to DIN ISO 9001 and won the Q1 Award of Ford Motor Company.

These terminals will allow you to open up entirely new areas of use for PC technologies.

Interested?
Then phone: 0211 - 25 07 60

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