

# Getting True Process Information Through Networking

by:

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Collecting complete and accurate data right at the machine, along with software that makes this data immediately available to managers, allows optimum process control and profitability.

Computers and information technology products are becoming more common throughout the manufacturing industry. But how often do these systems give true insight into production processes, and show directly how to increase profitability? Too often, information technology (IT) software falls short of giving really valuable information and instead just records orders, schedules and accounting information.

However, IT systems can deliver real-time production data as well as profitability analyses. If these systems provide access to accurate and complete shop floor data, IT technology can present useful information in a timely manner and help to increase a company's profit.

One way to do this is through the approach used by **Process Technologies Group, Inc.** The company's IMPAX TSS (TimeSaver System) consisting of a TimeSaver Machine Monitor and corresponding TSS software, collects data at the machine and carries this data across a network to a central place where it is analyzed and presented in a useful way.



The IMPAX TimeSaver Machine Monitor

## Getting Real Production Data

Any information technology system is only as good as its information. An advantage to the approach used by the TimeSaver System is that it collects real production information, since the data is collected by IMPAX TSS machine monitors that are on the shop floor.

Using an approach like this means all machine data can be tracked including data that was previously only estimated. Basic data such as production counts, machine speed (RPM), and scrapped parts are tracked along with machine uptime and downtime. Furthermore, each machine downtime occurrence is individually logged. This log includes the reasons for downtime, as entered by operators using a simple touch-screen interface. Operator response times to machine downtime are also recorded automatically.

In addition to collecting basic machine data, the TSS monitor tracks advanced machine information. Machine running efficiencies are calculated, highlighting overall production performance. Overall Equipment Effectiveness (OEE, a popular performance metric) is computed in real-time, documenting a machine's availability, performance and quality levels.

RUN		DAILY DOWNTIME OCCURRENCES 1-4		12:00 PM 12/00/00	
DT START	DT END	RT MIN	DT MIN	CODE	CHOSEN
1230	1232	0	2	WORKING ON OTHER MACHINE	
1215	1220	1	5	PREVENTATIVE MAINTENANCE	
1200	1205	3	5	MACHINE ADJUSTMENT	
0000	0000	0	0		

The IMPAX TSS automatically tracks all downtime occurrences as well as the reasons for the downtime.

All data is tracked by date and shift as well as by current part numbers and operator ID.

### Information Quality

Many existing systems have ways of collecting this data, but they provide varying degrees of success. Often, some or all of the data is recorded by hand after the operator uses measuring techniques including the weighing of parts, hand-counting scrap and estimating downtime durations. Sometimes this data is passed along to several persons before being entered into a software program, which allows human error to be introduced, and ensures that the data will not be available for review until long after the fact.

The advantages of a system such as the IMPAX TimeSaver System, come from how it collects the data automatically at the place where the data is generated. No additional labor or needless paperwork are required in order to track a process.

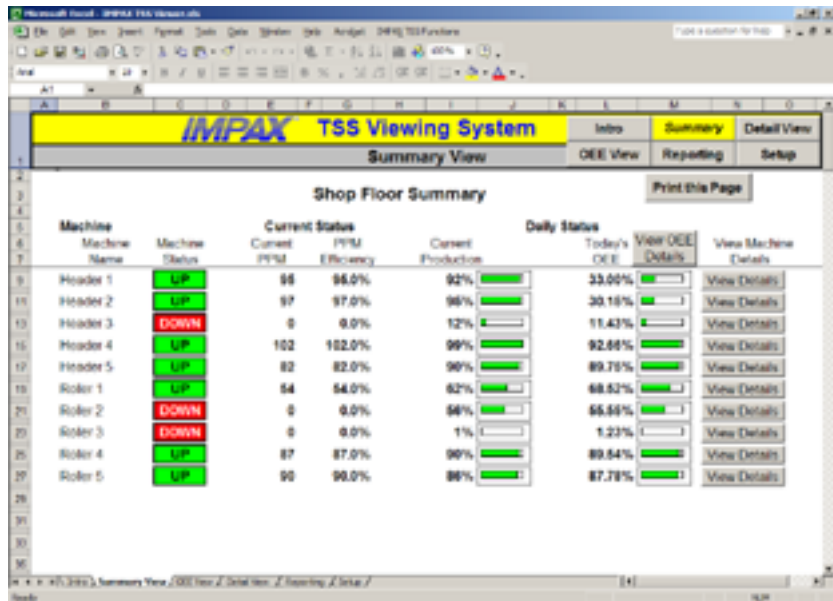
The IMPAX TSS Machine Monitor receives signals directly from sensors that are mounted on the machine and from its easy-to-use touch-screen interface. Therefore, the information provided to the TimeSaver networking software (TSS-NET) is 100% complete (omission-free) as well as accurate (error-free).

### Turning Information Into Profitability

The benefits of having an IT system that collects complete and accurate data are obvious. But it can still be difficult to cost-justify the installation of such a system. However, with a little analysis, it can be seen how software like TSS-NET can turn production information into a plan for solving problems and increasing efficiency. IT systems excel at illustrating the strengths and weaknesses of an organization, and based on this knowledge, actions can be taken to focus on the strengths as well as to shore up any weaknesses.

Good business relies on identifying and exploiting process strengths and positive trends. TSS-NET software can process the data collected by IMPAX TSS monitors to find parts that tend to be profitable, machines that run at high efficiencies and operators with good records. Once such trends are isolated, they can be focused upon, allowing more profitable orders to be sought out and efficient machines to be used as examples when maintaining other machines. Also, experienced operators can train new personnel.

But emphasizing the positive is only half of the story. IT systems can also identify weaknesses and problems in a process, and are excellent at finding problems that would not show up at first glance. With a data analysis package like TSS-NET, even subtle trends can be identified. Not only can unprofitable parts and common downtime reasons be identified, but so can less obvious issues, like parts that run better on certain machines or machines that have repeated occurrences of the same type of preventable downtime. With information like this, problems can be addressed and corrective actions taken. Problems can be ranked according to their se-



The IMPAX TSS-NET software system displays live production data as well as identifies problems before they have a negative impact on fastener production.

verity, and machine repairs and operator training can be cost-justified. And a further advantage of the TimeSaver System is that conclusions like this can be made in real-time, so solutions are implemented before the problem requires large amounts of time and money to fix.

### The Bottom Line

Just like any other company project, IT systems must increase the company's value at the end of the day. Many systems that promise this kind of return on investment come with many hidden costs, like requiring operators to learn a time-consuming procedure or requiring data-entry work to actually get machine data.

The IMPAX TimeSaver System, however, makes use of monitors that collect data right at the machine and networking software that makes this data instantly available to managers. Powerful reports and insightful analyses can be performed, resulting in conclusions that can help make any process more profitable. When it all comes down to the bottom line, IMPAX TimeSaver monitors and software deliver information that makes a difference.

To receive additional technical specifications on the IMPAX TimeSaver System that automatically collects complete and accurate data right at the fastener manufacturing machine, contact the author via their information below.

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#### Company Profile...

*Process Technologies Group, Inc. (PTG) designs and manufactures process monitors, efficiency monitors and data collection software. The IMPAX TimeSaver System is the company's machine efficiency and downtime tracking system. PTG can be reached via toll-free phone at +1 800 393 4777 or the company can be visited on the Internet at [www.impaxptg.com](http://www.impaxptg.com).*