SHOP EDGE SOFTWARE INC.

ERP Software
Exclusively for
Metal Stamping

One Industry. One ERP. One Focus.

Powerful Cost Saving Techniques Used in Metal Stamping

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Inside this **Industry Edge Report**:

- How to reduce excess inventory
- Recover funds tied up in inventory
- How to save money on the shop floor
- Improve Overall Equipment Efficiency and "level load"
- Become a more efficient company by integrating scheduling and tooling
- Make better decisions and put money in your pocket

Volume 1, Issue 1

Introduction

Shop Edge Software publishes a series of "Industry Edge Reports" that are designed to address salient issues and topics of concern within the Metal Stamping Industry. The January 2009 "Powerful Cost Saving Techniques Used in Metal Stamping Today" was researched and written in an effort to highlight various cost control initiatives currently being undertaken by many organizations within the industry. It is anticipated that Metal Stamping will be subject to severe industry pressures in the coming months as the slowing of the global economic engine occurs. The media has presented the prospect of a looming financial crisis. Consequently, we have documented in this report some of the various cost saving strategies that are being employed by a number of companies within our industry. Furthermore, the financial results of these strategies have been carefully collected and presented in an effort to support our community within Metal Stamping.

Approach

Shop Edge understands that you need to manage your job costs closely now more than you ever had to before. Outlined below are what we believe to be transferable approaches that some of our customers have shared with us, regarding the optimization of cost control. We are pleased to provide this information to the Metal Stamping industry and wish to sincerely thank our participating customers for their support and suggestions in the creation of this report.

Using a prepared introduction to the issues with our participants along with carefully constructed and identical questions for each participant we were able to collect raw responses from each customer. This information was subsequently edited by the same participants and checked for accuracy.

Approach cont'd...

It is our sincere hope that this customer survey data is of value to the wider community and that it is beneficial in supporting your own efforts around cost control and saving your hard earned money.

This survey of our customers, who are exclusively in the Metal Stamping industry, uncovered a major beneficial side effect of our involvement in just "**one industry**" and it is this singular focus on Metal Stamping that has illuminated a number of key cost control practices. Again, it is this singular focus that sets ShopEdge and this report apart and helps our customers to achieve remarkable "**cost control**". The solutions presented are industry-specific empowering operational excellence by facilitating collaboration within each business as well as with their customers. Consequently, organizations-similar to your own-see a complete solution approach that provides maximum value to themselves; the customers they serve and at the same time **drives out costs** giving them a competitive edge.

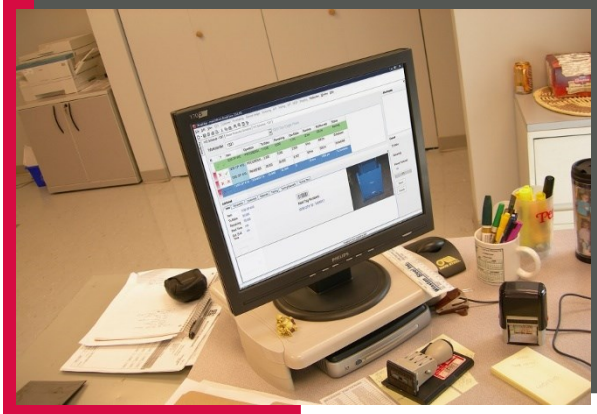
"Organizations-similar to your own-see a complete solution approach that provides maximum value to themselves."

"This survey uncovered a major beneficial side of our involvement in just '**one industry**'."

Key Performance Indicators for cost control in Metal Stamping

The two primary and most costly operational "**Key Performance Indicators**" (KPI's) seen consistently throughout the survey were those of Inventory Management Practice and Optimization of Production Scheduling. Each of these two primary KPI's involved additional sub-components or other related business process.

With **Inventory Management** raw materials, WIP and finished goods inventory were differentiated along with the labor cost associated with these inventories.



Production Optimization also relied heavily on integration practices in Tooling and Scheduling and the labor management practices with both scheduling and tooling. We will describe each primary and associated sub-component in detail below.

Inventory Management KPI

"Overall our inventory levels amounted to $1.2 million. Our current inventory is $250K and is expected to drop to $175K soon with all of the same sales volume out the door." -Greg Ducharme, LAM Ltd.

"Increased visibility to these inventory levels and the confidence in the accuracy of data enabled a much leaner production environment."

Money is constantly wasted in excess inventory, which is why many companies know they need to have a proven metal stamping inventory management system for both raw materials, work in process (WIP) and finished goods. Real-time inventory visibility translates into lower costs for you and your customer, and significantly less money wasted on unnecessary raw materials.

Advances in software design and functionality (Inventory Control modules) now provide the capability to help control and identify issues before they arise. Companies like yours now have the ability to have inventory counts at their fingertips. Many manufacturing and metal stamping companies lack both accurate data and clear visibility leading to excess inventory levels. Or, at the very least, they keep redundant inventory items on hand as "safety stock", or simply as inventory that can be easily found.

Minimize your Inventory Costs

Poor or no inventory visibility in a real time environment translates into cash that has been transformed into excess inventory that is simply taking up valuable space within your facility. The amount of this "Net Working Capital" that is transformed into inventory can be very significant. We have documented as much as $950,000 to date in overall surplus of raw material and finished goods inventory within organizations that were routinely operating at a $1,200,000 level of overall inventory. Moreover, for selected projects the life cycle of this excess on hand inventory was approaching two years.

One of our customers reported that the increased visibility to these inventory levels and the confidence in the accuracy of data enabled a much leaner production environment. The subsequent efficiency gains were seen in a number of areas across the enterprise. Most significantly, overall inventory levels were reduced as a result of implementing automation. This automation consisted of the execution of a bar code scanning system running on a wireless RF infrastructure and the transmission of this information to a central repository, the Shop Edge ERP software. The result was reliable real-time and accurate information that could be easily visualized. This visibility also reduced the "Net Working Capital" tied to raw materials inventory from a level of $750,000 or a 75% reduction within only six months. This represented a significant cost savings as well as an improvement in cash flow.

Inventory and Labor

"We needed a bus route, not a taxi cab; a way to standardize material handling." -Gary Wicker, Ada Stampings Inc.

An enormous amount of time is spent on finding and handling materials in enterprises with poor or "zero" inventory visibility. This obviously translates into lost time in production and in earnings.

"The labor savings from eliminating non-productive activity in this real-life case resulted in $37,500 of direct labor cost reductions per year."

Consider the cumulative impact that companies reported in lost time as a result of spending periods searching each day or even shift in order to secure the correct materials. For example, a customer reports that prior to automating they required ten employees, over three shifts, to each spend on average one hour searching for inventory. This non-productive labor time totaled 10 hours per day or 50 hours per week. Knowing inventory locations saves you valuable time. Many companies fail to recognize the cumulative cost of this labor component; the "man hours" spent searching easily reaches over sixty weeks per year in time spent simply searching for raw material. The elimination of this cost can drive a much healthier bottom line. The labor savings from eliminating non-productive activity in this real-life case resulted in $37,500 of direct labor cost reductions per year.

Expedited Shipping

Similarly, no visibility also results in additional and costly expedited shipping charges that affect your profitability. Having to expedite both inbound and outbound shipping as a result of poor visibility reached a level of for or five expedited trucks per week, costing an additional per truck surcharge of $250. Having available and accurate inventory totals at your fingertips means you never have to pay expedited shipping costs. Since the inventory levels required for production targets are directly linked to your manufacturing schedule you can eliminate expedited shipping. In this example, eliminating the 4-5 expedited trucks per week resulted in a real cost savings of $50,000 per year.

Inventory Management Results

During our focused interviews on the inventory management KPI we were astounded by the huge amount of lost cash. Simply put, the total cost of operating without a proven inventory management system in place was illuminating. Within our community of metal stamping firms surveyed, the collective loss was startling. Having your cash tied up in excess inventory, the cost of non-productive time searching for materials and the consequent impact on shipping costs was profound.

We were able to capture the following details from our community of metal stamping customers. Inventory reductions of unanticipated size can be reached through the adoption of an automated system. This was identified as $950,000 in reduced capital outlay in year one. With a typical burden rate there is also an unforeseen cost ($37,500) in non-productive work.

Finally, efforts required to reach scheduled production ship dates can also be surprising if there is limited visibility. Additional shipping costs can result in an added cost of $50,000 per year. Collectively these real life scenarios can cost a metal stamping company as much as $87,000 each year. Obviously this is money that could easily be directed into the deployment of a Metal Stamping ERP solution but it is also money that can be much better spent every year in improving the overall business performance and the financial health of your company.

Optimized Scheduling KPI

*"We were looking for a system that allows us to be flexible and responsive to customer requirements but also supports **short lead times** and excellent fulfillment rates supporting our lean manufacturing philosophy." -Cecil Derryberry, Tennessee Stampings (Pulaski)*

During our discussions we were consistently reminded by our customers that the key component required for the optimization of production scheduling was that of having one central mechanism for command and control of the process. This central mechanism or business resource was necessary for a smooth and integrated performance and for meeting crucial deadlines. The core strengths of such a mechanism or system, designed for our industry, were considered to be simultaneous Metal Stamping **Production Scheduling and Control** capability. This capability is the foundation of an advanced system and is what will assist you in reaching your desired competitive advantage. Having a solid scheduling module translates into reduced costs where you need it: on the shop floor.

"Innovative and Advanced Scheduling and Control reduces costs by improving Overall Equipment Efficiency (OEE)."

Managing Production Schedules

"We were looking for a system that could improve our Production Scheduling. Taking into consideration small quantities, on-time delivery, highly efficient production, and reducing our set-up times" -Adam Tomlan, ISM

Innovative and Advanced Scheduling and Control reduces costs by improving Overall Equipment Efficiency (OEE). Having the ability to "level load" and consequently minimize change-over times results in a positive OEE. A scheduler, designed from the shop floor up, measures equipment and tooling availability, and maximizes usage making sure you are running jobs at peak efficiency. By combining Production Scheduling along with an **Integrated Tooling and Maintenance** module assist companies by reducing loss types such as setup and adjustment, breakdowns/machine failures, and small stops. Reducing loss types saves you money.

The key factors associated with driving towards peak efficiencies across the shop floor have been identified as:

- Consistent loading associated with your equipment or "level loading"
- Minimizing change over time
- Accurate data on your customer's historical forecasted patterns

Time is money, and a predictable steady state production pattern will assist you in attaining peak OEE and in saving more money.

The results often seen with "stand alone" scheduling mechanisms are that you cannot use your equipment to maximal effectiveness. Without integrating scheduling with the tool room and other functional areas, (i.e. Procurement, Materials Management Quality assurance etc.) then it is likely that daily issues or "fires" will deflect you from achieving improved OEE. The fires resulting from operator issues, tooling preventative maintenance programs, press and die compatibility, supplier integration (especially steel) and of course customer driven changes, all contribute to lower OEE. You need a system that can manage these issues automatically creating time for fire fighting.

"By insuring that you're tooling management practices are well integrated with production you insure that the right tool is available and assigned to the correct production schedule."

Consider the contribution to low OEE of increased "Setup and Adjustment". These loss types are exacerbated when you cannot measure equipment efficiencies directly and incorporate your existing manufacturing schedule. Relying on historical data or operator opinion can minimize your OEE. This can be overcome when you have the capability to integrate functional areas of your business and then set a schedule accordingly. The results are seen in an equipment utilization increase of 10% over each 24 hour period. This 10% utilization gain provided a $100,000 production revenue improvement with our customer.

Integration Practices in Tooling and Scheduling

"London Automotive is looking for an advanced shop floor scheduling system that places each piece of equipment in a 'level load' state, and impacts our OEE positively by decreasing equipment change over." -Greg Ducharme, LAM Ltd.

When there is no coordination between the production schedule and the requisite tooling maintenance the result is often poor OEE. By insuring that you're tooling management practices are well integrated with production you insure that the right tool is available and assigned to the correct production schedule. Inadequate tooling management contributes to poor OEE.

Furthermore, we typically see increased labor costs and lost time due to no visibility of the tooling shop personnel of the overall production schedule. If the tooling shop has limited visibility and little understanding of the required tool synchronization for each production run then we have created "islands of activity". One island of activity is the tooling shop and another production scheduling. Consequently each island is operating without optimal integration. By integrating your Scheduling functions with your Tooling functions you can now prioritize tooling with the scheduling of production. This improved scheduling has been demonstrated to reduce the headcount (i.e. a reduction of 8 FTE offering a yearly savings of $300,000) required to maintain production targets and simultaneously improve OEE.

"Without reliable scheduling, your raw material inventory totals that directly impact production are often inaccurate."

Labor Practices in Tooling and Production Scheduling

In addition to the benefits derived from scheduling and tooling integration as described above, our results also indicated that without reliable scheduling your raw material inventory totals that directly impact production are often inaccurate. Consequently, additional employees are often needed to manage and maintain production targets. The inefficient scheduling, as a result of little integration requires additional inventory levels and requires two to three additional employees to both manage material flow properly in order to meet and support production output levels.

Thus, the optimization of labor as a result of inventory and scheduling integration allows you to redistribute your resources effectively and add greater levels of efficiency to your production processes.

We were able to quantify this labor savings opportunity in our survey and determine that the improved production levels from integrated scheduling resulted in $120,000 of direct labor cost savings after the integration occurred between scheduling and tooling.

Optimized Scheduling Results

We are all aware of the impact on production time due to extended change over times. Obviously a number of strategies are required to minimize this impact. However, a crucial factor in maintaining maximal OEE is simply having the "right stuff at the right time". This includes having the proper tooling available for every production run. Production time and labor are seriously affected when there is a "tooling event" due to unavailable tooling for your production run. Both sub optimal production run time and unproductive labor, devoted to supporting inefficient process related to tooling set up and inadequate inventory, are amplified when these events occur.

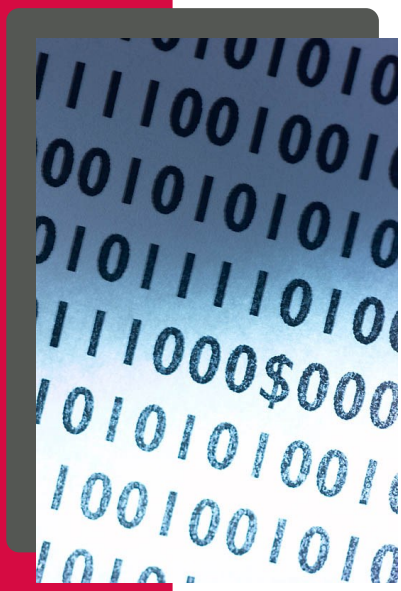
"Potential ongoing business process improvements will be vital in the sluggish financial environment predicted."

We were able to consistently find across our surveyed participants that, on average, production time improvements due to "load leveling" and effective scheduling were increased by 10% per day. It became very evident that synchronized tooling and scheduling saves labor and time and optimizes resources. The savings found were dramatic and reached $300,000 in labor savings per year in one example. Additionally these inefficient processes typically require additional labor to support the inefficiency. We were presented with an example of optimized labor savings as a direct result of tool scheduling. Since the labor required to support inefficient scheduling was now eliminated, labor was redeployed (not to inventory and set up) saving an additional $120,000.

Optimizing scheduling and tooling not only adds OEE but drives a remarkable labor savings opportunity. In the examples above a total of $420,000 in direct labor saving strategies were identified. The labor savings found through accurate tooling integration is definitely a strategy worth pursuing.

Conclusion

With all of the mainstream media reporting a downturn in the economy your cost control strategies will play an even more profound role in how you support your business over the next 12-18 months. Are ineffective cost control strategies constraining your ability to grow? Potential ongoing business process improvements will be vital in the sluggish financial environment predicted. The types of business improvements and efficiencies outlined in this report may become critical in uncertain times. Adding new customers and keeping your existing customers happy will need to be a higher priority in the short term.



Do you employ the key strategies outlined in this report? There are two significant approaches; KPI's that you can take to streamline your business and to cut costs. Inventory management and optimized scheduling are the key performance indicators in a metal stamping cost control strategy. Like a pebble in a pond they drive additional productivity improvements in working capital, visibility and labor, OEE and improved labor deployment. Implementing just these two approaches alone will offer remarkable savings and improve your competitiveness in the metal stamping industry. Excellent cost control will also allow you to build business speed and enable leaner business processes. Consider investigating the potential of replacing your existing business systems with an affordable specialized metal stamping ERP solution.

We anticipate that efficiency will become the name of the game and our next Shop Edge Industry Report will focus upon what efficiency means in today's metal stamping industry.

References

The Q 1 2009 survey by Shop Edge Software Incorporated - metal stamping industry domain experts and participant list for Industry Edge Report, "Cost Control in Metal Stamping" consultation and analysis. December/January 2009. Cost control numbers are accurate and were provided during the survey from our customers specifically involved in Metal Stamping.

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About Shop Edge Software Inc:

Forward thinking metal stamping companies trust Shop Edge Software to empower their operations with an affordable ERP solution exclusively designed for their one industry. Shop Edge Software simplifies and coordinates metal stamping. We do business the way you do it; business processes are strengthened and long term benefits are realized with an intuitive and easy to use solution that turns real life metal stamping data into knowledge. Shop Edge Software helps hundreds of users across North America to streamline operations, improve efficiencies and cut costs.

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"Efficiency and Productivity Gains in Metal Stamping"