

Using Available Data to Improve Performance and Generate New Revenue Streams



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ARTICLE TAKEAWAYS:

- Equipment controls continue to increase the amount of useful data to improve performance
- How to use of this information to benefit operations
- Using data in-house and to generate entirely new revenue streams

CHIPS

It seems fitting to begin this with a discussion of chips, as they are an all-consuming topic given how difficult they have become to procure. Gordon Moore predicted that the amount of information a microchip could process would double every two years, while the cost of that processing would decrease by 50% in the same time period. This is a revolutionary idea and has empowered a transformation in the way everything works. We have been reminded of this recently as the world's chip shortage has been crippling to many industries and may lead to an entirely new round of innovation. Shifting away from the issue of being able to get chips at present, if we focus on what they can already do for us, I will posit that there is an abundance of available information not being used. If we

put this information to better use it would provide opportunities for improvements within our own companies and allow companies to develop entirely new revenue streams.

INFORMATION CURRENTLY AVAILABLE

The control systems and interfaces that are used in today's modern manufacturing equipment can gather substantial amounts of information. This information has the potential to be valuable to the users in a variety of ways. In a prior Simple Solutions article, I talked about this in relation to a SMART Pump developed by Molten Metal Equipment Innovations (MMEI). The pump can gather process information and make decisions about how to react to changing conditions including metal temperature, metal levels in the furnace, and vibration. These things work together to

improve the overall performance of the system and can facilitate increased production at a lower operating cost. As the developer of this system, I am biased, and thought we would sell this new capability on every new pump. We haven't, and I think this is a good example relating to all of us, of missed opportunity to make use of new information that we can procure for little to no extra cost. In the current manufacturing environment, we should take every opportunity to increase flexibility and deploy technology to increase output and decrease cost. Some of the most basic examples of this relate to how we operate our own manufacturing processes. The machines used to make our own products (CNC, Casting, treatment, etc.) are equipped with the chip capacity to gather and deliver data in real time. We don't always use this data and as a result, don't know how we are performing. In one of our businesses, we set up a simple information loop that displays information on a flat screen in the cell that allows the operators to know exactly what rate they are making in real time. This has many benefits to the overall operation and requires no data input or gathering after set up, as the PLC is fully capable of doing that. We can now see exactly

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what we are doing and can make immediate adjustments, analyze trends, and look for root causes to address for improvement. This has generated immediate, measurable, improvement. This is a basic issue, and we should have been doing it long ago. There are many more examples of using what we already have for continuous improvement.

GENERATING NEW REVENUE STREAMS

In addition to improving our in-house operations, this data can be the basis for an entirely new revenue stream for the company.

The capacity of systems and products can be used to gather valuable customer data, to potentially use in ways outside of the product we sell. In the SMART pump example above, we now have visibility and connectivity into our customer's process and can use that to gather additional process data. This data can be used to improve the operation in ways beyond what we are analyzing relating to pump performance. This can be helpful and fosters a robust, valuable dialogue. With the right approach, we can address issues in connectivity, reliability, and security.

HERE TO STAY

As we have all become arm chair epidemiologists, it seems clear that Covid and the impact it has on our industry are here to stay. We have all found new ways to do things, and we continue to evolve in spite of the challenges we would not have envisioned a few short years ago. Maximizing the benefit resulting from available information and data is of great importance to all of our businesses. Like most things, it requires effort in the beginning, but then becomes second nature, supplying an ongoing return to the company in the form of flexibility and improved operational and financial performance. It seems clear that these opportunities will continue to expand as we increase the data generating and gathering power, and the potential positive impact they can have on everything we do.

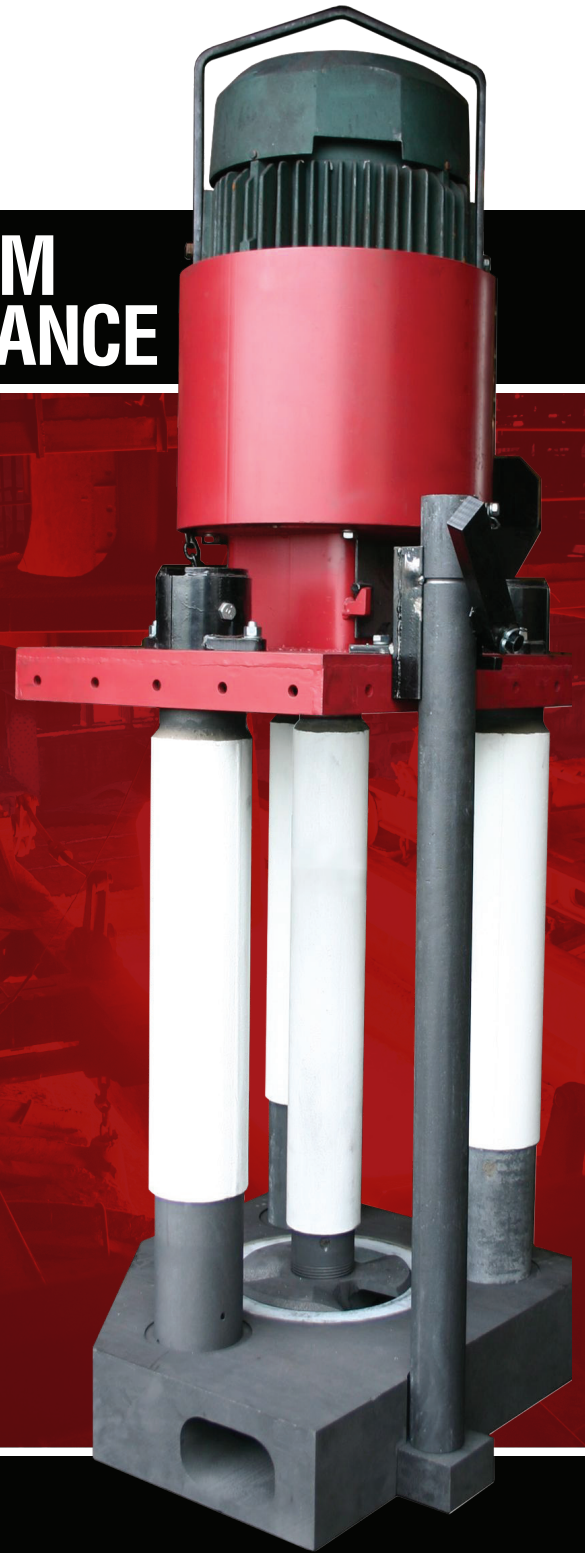


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