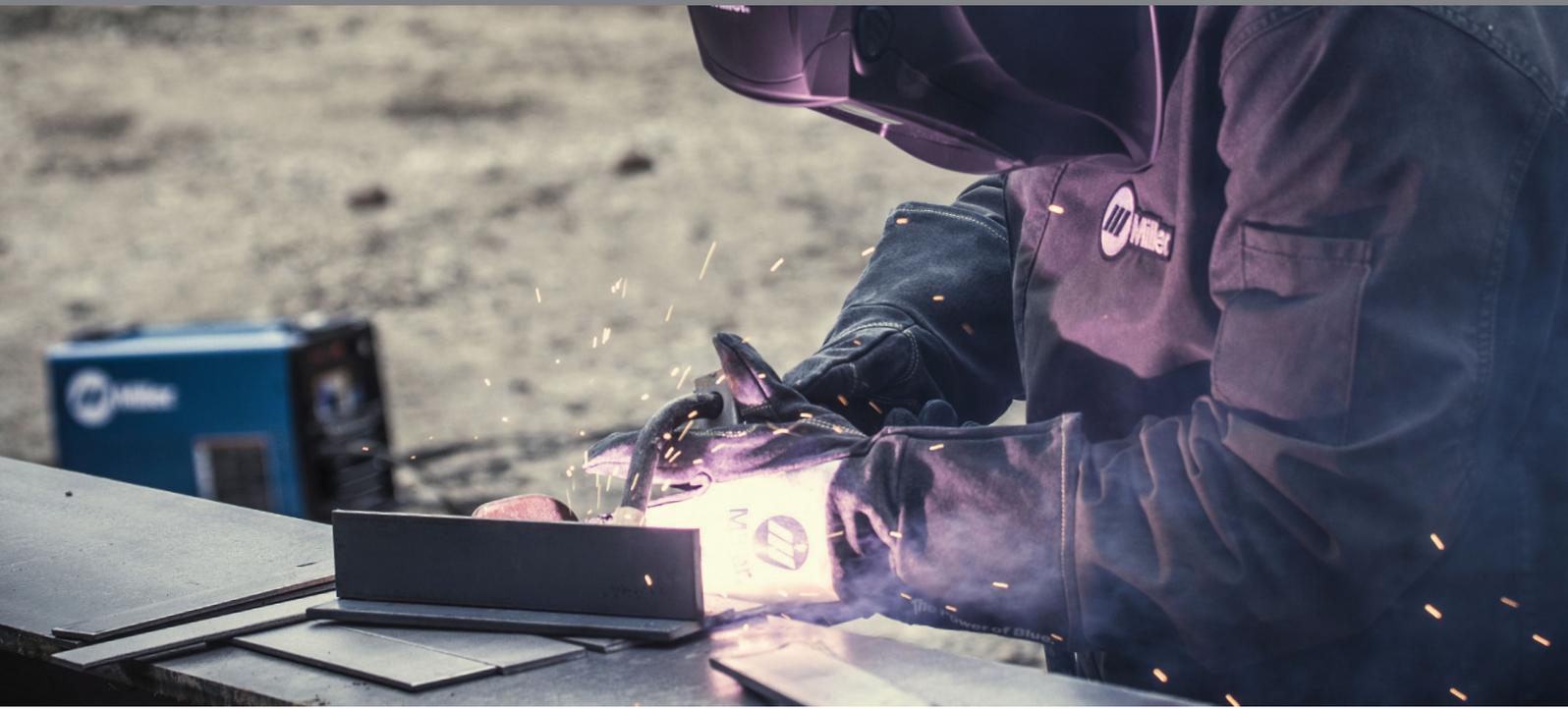


INSIGHT CORE TURNING WELDING DATA INTO DOLLARS



Introduction

There are many reasons why companies want to improve the productivity or quality of their welding operations, but real improvements aren't achievable without quality data. Having the right tools in place to measure and analyse workplace data is also essential for growth. A welding information management solution gives companies the ability to assess performance metrics, including both output and quality. This information – or data – can then be transformed into dollars by making improvements to existing practices. Accurate, real-time data collection and analysis gives businesses a baseline to work from and improve upon. Having the software in place to measure the impact of these improvements then enables businesses to establish benchmarks for quality and performance.

An effective measurement of productivity

The key to tracking improvement in a welding operation is to know how to effectively measure productivity. Productivity should not be determined by one single measure but by the assessment of three main measures: arc-on time, deposition rate and the number of pieces or parts produced. An efficient welding information management system will be able to provide insight gathered from all three measures.

Arc-on time

The question any welding operator needs to ask is, what is my arc-on time? Invariably, many cannot answer the question. Which means that they don't have a baseline to work from. A welding information management system will automatically assess arc-on time metrics. Because data is collected through automated technology and software – rather than manually – it provides both real-time and accurate information that can then be measured with other statistics such as the number of parts out the door.

Deposition rates

Tracking deposition rates is important for any welding operator. Being able to collect and compare data to see variations in deposition rates from day to day or week to week will provide insights into how these rates can be improved. Measuring these alone though will be misleading as deposition rates can vary significantly depending on the type and diameter of the filler metal used. For example, thick wire or filler metal produces a higher deposition rate compared with thin wire.

Number of parts or pieces produced

Using welding information management software allows operators to measure the pieces or parts produced easily. Tracking this production manually can be difficult. An electronic tracking system allows you to see how many parts or pieces are produced per day or per shift. Businesses can get an overview on exactly what is being produced and can identify trends or problem areas. This will allow them to address issues and create goals for improvements.

Identifying common issues from data

Studying the data produced by a welding information system will bring any operational issues to the surface and enable businesses to spot problem areas and trends. There are a number of factors that can impact the efficiency or financial health of a welding operation. These could be managerial, in the welding process itself or in the post-weld cleaning. Once these factors have been highlighted, an organisation can make changes that drive positive results such as increased arc-on time or improved deposition and throughput.

If a business discovers that their arc-on time and deposition rates are low, there are a number of causes to consider, including:

- Inefficient weld cell layout
- Wire feeding problems
- Parts not arriving at the weld cell on time
- Incorrect parts delivered to the weld cell
- Poor part fit-up that creates excessive time spent clamping fixtures and filling gaps
- Gas flow problems leading to contact tip burnback
- Downtime for maintenance issues, including liner changeover
- Rework of poor welds due to porosity or other issues
- Excessive time spent on post-weld cleanup or grinding
- Clamping fixtures that need replacing

The benefits of welding intelligence

Adopting a solution that provides insights into issues such as those described above will reap many benefits for a business. The key benefits include: increasing productivity by monitoring arc-on time and deposition rates, improving quality by taking action when weld parameters are out of spec, creating a proactive 'lean culture' based on goals set for welding operators, and the ability to recognise – in real-time – the effects that shop floor changes have on productivity.

Importantly, this type of data has quantifiable value. By gathering and monitoring quality data and then actioning changes, companies are able to actually turn the data

into dollars. Organisations can compare two different time periods in hours, days, weeks, months or quarters. They can also calculate data by percentages, hours, kilograms of wire used or shielding gas used per minute. Furthermore, they can determine dollar figures based on the inputs that users enter (such as labour time and material costs).

Besides bettering the bottom line, welding intelligence is also beneficial from a training point of view. Managers can assess the development of those in training or get a proper insight into how effective a specific training module or course has been. Which all circles back to business value.



Insight Core™



The Insight Core solution

While there are a number of welding information management solutions on the market, the simplicity and flexibility of the Miller Insight Core solution make it an attractive option. Designed for operators who use Miller multi-process machines, Insight Core is the ideal data collection and analysis tool for businesses seeking an easy-to-use, internet-based solution.

Insight Core works through either wireless or Ethernet connectivity to your company's information network. As each power source is used, data is generated and automatically transmitted. The data is sent to the cloud,

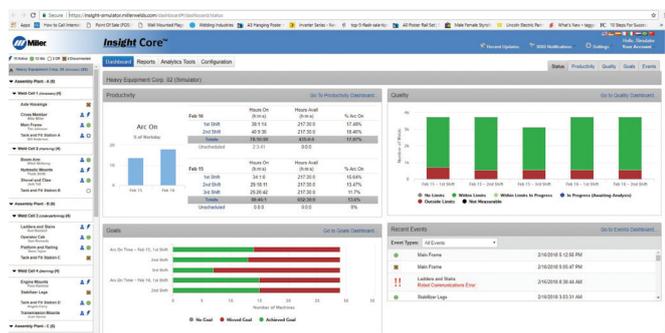
where it is processed, organised, securely stored and made available to view. Reports are then generated and can be delivered to any web-enabled device on the network.

The items that Insight Core requires for functionality include:

1. Welding Power Source and 14 Pin Remote Connection
2. Internet Connection
3. Device with Internet Browser
4. USB Stick

Meanwhile, its capabilities are wide-reaching. The solution is able to:

- Provide Microsoft Azure Cloud data storage
- Monitor productivity via arc-on time and deposition (Deposition MPa plus only)
- Monitor quality via amperage/voltage/WFS limits (WFS MPa plus only)
- Compare data via shift/operator
- Produce notifications via email
- Provide a weld trace for every weld
- Enable automated setup, data downloads, firmware updates via USB port
- Activate units via a single USB stick



Turning data into actionable information

Insight Core's user-friendly dashboards provide a snapshot of a welding operation's productivity, quality and progress towards goals. When more detailed information is required, the solution can deliver easy-to-read reports that are tailored to meet specific needs.

Main Dashboard

- Is the first destination for a full overview of essential reports of the welding operation
- The asset tree allows users to organise their fleet in a manner that makes sense to their context, whether that be by building, department or machine to make improvements

Productivity Dashboard

- This graphically displays arc-on times and deposition
- These displays are available by hour, day, week, month or in a user-defined range

- This allows for quick and easy comparisons and analysis of productivity

Quality Dashboard

- Shows user-definable upper and lower thresholds for weld amps and volts
- Shows where date and time stamps have been recorded for welds including average amps, volts and Weld Trace details
- Distinguishes between those welds falling inside and outside of established limits

Goals Dashboard

- Allows for easy evaluation of progress towards goals for arc-on time, weld deposition, weld quality and more
- Shows statistics for individual power sources, work groups, shifts or entire weld fleets that can return significant dividends

Whether an organisation wants to increase their welding productivity or improve the quality of their welding productions, having access to quality data is essential. The Insight Core welding information management solution makes it easier for companies to compare productivity metrics and convert their welding data into financial benefit. Moreover, as businesses are under more pressure to record and report their operational statistics, a solution such as Insight Core simplifies the process and eliminates the time that would be spent in collecting and analysing data manually. Insight Core brings value to any organisation where welding is a crucial part of business or where welding productivity is a key measure. Its user-friendly interface and flexibility add to its appeal as a data management tool. As a cloud-based solution, it is portable and can be used with a wired or wireless internet connection. The bottom line: Insight Core helps businesses turn welding data into dollars.

For more information about this solution go to: www.welding.com.au/equipment/view/insight-core or call WIA's Customer Support Team on 1300 300 884

