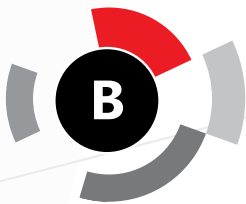


CASE STUDY



BROCK
solutions

CASE STUDY





410+ Employees



Continuous Cast Iron Bars



Woodstock, IL, USA

Charter Dura-Bar, headquartered in Woodstock Illinois, is an industry leader in the manufacturing and supply of continuous cast iron bar stock serving over 3,000 global customers. Charter Dura-Bar is a subsidiary of Charter Manufacturing.

SUMMARY

! THE CHALLENGE

Recognized that they were poised to take advantage of market opportunities to expand but were constrained with legacy and manual manufacturing systems. They wanted to increase capacity, efficiency, and quality to position themselves for future growth, optimization of product lines, and being able to make knowledge based decisions in the manufacturing environment while setting the stage for a major ERP upgrade.

✓ THE SOLUTION

Brock Solutions was engaged to help define a path forward with a Framework Study. This led to the implementation of a commercial MES system based on Rockwell Automation FactoryTalk ProductionCentre that uses Brock Solutions' metals library to improve operations and replace the legacy, Access-based application.

THE CHALLENGE

The shop floor at Dura-Bar included a variety of custom, homegrown database applications with limited user-interfaces built internally over the past two decades. As the company grew, the need to shift away from the use of paper and manual tracking became paramount. Dura-Bar needed to leverage modern and sustainable technology, that can also be supported by Corporate IT and Engineering, to streamline operations, reduce manual data input, improve asset utilization, enforce quality checks, and reduce scrap. The system was also required to be able to accommodate the transition from the current legacy ERP solution with minimal changes to a new Oracle ERP with standard messaging in the second phase.



THE APPROACH

Brock Solutions conducted a Framework Study that defined future state requirements, roadmap, benefits, phase transition approach for ERP, and the real-time operations environment. Following this study, an implementation of Rockwell Automation's FactoryTalk Production Centre, covered the process from the starting point of melting through the completion of quality inspection of the cast finished goods product. This solution provided a commercial MES solution that met and improved on Dura-Bar's business and operations requirements.

THE SOLUTION

The end solution was delivered on time and budget with excellent user engagement and buy-in. The system was used from Day 1 of commissioning with the Lab users deciding to rely 100% on MES during the first week instead of a planned multi-week approach of using the new and legacy systems in parallel. Four months into the project with the improved access to information, ability to make immediate decisions on that information, reduced time spent on non-value add tasks and able to focus on operations, users having a defined process to follow, and operators feeling accountable and taking ownership, there are already many tangible benefits being experienced, including:

- A platform for flexible and sustainable corrective actions when quality issues occur with a zero-production delta dip upon go-live.
- Utilizing built-in MES functionality and integrations to the ERP system, optimized transactions deliver real time data and save roughly 4-7 minutes per transaction for every bundle of inspected product.
- Planners & Operations Supervisors have increased visibility into scheduling gaps and statuses of upstream tooling and set-up operations, increasing their pound per labor hour.
- Raw Historian data and trends have enabled supervisors and operators to troubleshoot issues out at the barlines faster resulting in minimal downtime. Having access to the raw data has also allowed them to remediate issues based on facts instead of on gut instincts.
- Workflows created during Framework Study and updated through the project implementation provided a foundation that Charter are using for their Oracle implementation. This simplified and accelerated discussions on how operations actually work and confirmed touchpoints to MES.

To Dura-Bar this digital journey was a world of unknowns, but the last two years of working with Brock has been fantastic. Everything has been delivered on time with great quality, and under budget. This project has set us up for success as we continue our digital transformation journey.

NEXT STEPS

Dura-Bar is continuing to identify and invest in continuous improvement of the system as users find additional ways to improve operations with the increased visibility, improve quality, and enhance user experience. The next phase of the implementation underway will see the MES system interface real time plant operations with their Oracle ERP system. To enable rapid support and continuous improvement, Brock Solutions' sustainment services has allowed Charter Dura-Bar access to a pool of resources and talent across a variety of technologies that they would otherwise have had to hire additional personnel to drive continuous improvement in the environment.

The MES system is easy to use. It enables us to go paperless and save a lot of time. All information is available in a single system and can be viewed from any terminal, allows us to make quick informed decisions. We can focus on making bars and not have to update paperwork every 30 minutes.

Plant Floor Manager
Charter Dura-Bar

ABOUT BROCK SOLUTIONS

The largest, independant global integrator in the real-time digital space.

\$150⁺
MILLION
IN REVENUE

600⁺
INDUSTRY
PROFESSIONALS

30⁺ YRS
EXPERIENCE
MES & AUTMATION



Serving customers in multiple sectors of the manufacturing industry

Continuous

Batch

Discrete

Complex Assembly