

CASE STUDY

CONICA



The Company and Project

CONICA develops, manufactures and supplies an extensive range of surfacing solutions for the playground, sports, landscaping and resin flooring markets. With a rich heritage in surfacing solution innovation and manufacturing, the UK arm of this Swiss owned business operates a state of the art tyre recycling facility in Newark, with the end product used in a range products.

SUPPLIER:

Bensons Control Panels

CLIENT:

CONICA

PROJECT:

Control panel for a tyre recycling process

RESULTS:

Collaboration to provide a complete solution

The Challenge

CONICA wanted to install additional capacity at their Newark Site, in the form of a new steel processing line to operate alongside their existing tyre recycling line.

The prior control panel supplier that they had used was no longer trading, hence they needed to find an alternative supplier with the capability to not only design and build a control panel, but also to develop the complex PLC programme needed to safely integrate the operation of several large pieces of automation equipment.

The design and build of the production line was being managed in house by CONICA staff, who also had other duties on site, hence they needed a supplier they could rely upon to deliver the project and allow them to focus on their core duties.



The system needed to be able to operate both automatically and in manual mode.

Whilst CONICA had a concept for operation in mind, this was not fully documented and there was a risk that if operation was not defined and agreed at the start of the project, then the commissioning phase could become time-consuming and expensive as unplanned modifications were implemented.

Ultimately, CONICA needed a partner to collaborate with who could lead the software and hardware design and build process, allowing CONICA to focus on the performance and operation of the production line.

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The Solution

To use an existing relationship with CBM-Logix to provide a successful integrated solution .

Bensons identified that specialist knowledge in the automation of production lines was required to deliver the project successfully. The capability required was beyond that available in house at Bensons. Bensons has an existing relationship with local experts in the development of PLC control solutions for manufacturing automation, CBM-Logix. Bensons facilitated the development of an integrated proposal with CBM-Logix which was agreed with CONICA

To minimise the risk of an extended commissioning phase, through a process of workshops CONICA, Bensons and CBM-Logix developed, refined and agreed a Functional Design Systems (FDS) to clearly document all operational requirements for the system.

Safety is a key consideration in any automation system, hence considerable attention was given to the safety interlocks needed on the new steel processing line to eliminate the risk to people or equipment during operation. Once the FDS was agreed, Bensons developed a control panel design, collaborating with CBM-Logix to ensure alignment between hardware and software development to ensure alignment between hardware and software development to achieve the requirements.

The system was controlled by a Mitsubishi PLC, remote access via a 4G modem. This 4g Modem was designed with secure, end-to-end encryption and two-factor authentication to protect the connection. It was also used to provide the potential for cost effective software updates in the future as required.

Once the control panel was built and tested, the software was loaded at Bensons site and the integrated solution tested prior to delivery to the CONICA facility. This ensured that any system bugs were identified and addressed before commissioning.

Bensons and CBM-Logix provided engineers on site to support CONICA with the testing and commissioning of the system, ensuring that the new steel processing line would operate in line with the requirements of CONICA.

Once the line was commissioned and operating, a small number of minor changes to interlocks were identified. By use of the 4G modem it was possible to implement software up-grades without the need to send engineers to site. This allowed the up-upgrades to be implemented in a cost-effective and timely manner.



The Result

Through a process of collaboration between CONICA, Bensons and CBM-Logix, the detailed operational requirements for CONICA'S new steel processing line production facility were established, documented and agreed.

A design for a control panel and associated PLC control solution was developed, tested and commissioned on site in a time efficient manner.

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