

Industry: Steel /// Manufacturing

Products Used: Modular PLCs /// HMIs

Increased press capacity and flexibility

Camford Pressings has doubled parts per hour and greatly reduced down time for a group of 500 tonne presses. This was achieved by installing robots and a quick die change system controlled by an automation system from Mitsubishi Electric systems integration partner, Industrial Electronic Automation Ltd.



IEA designed and supplied the high speed system using Mitsubishi Electric A1S programmable logic controllers (PLCs) supervised by MAC 90 industrially hardened graphical user interfaces, also from Mitsubishi.

When the system was first installed, the presses were allowed to open fully before the robot was instructed to move. However, because a Mitsubishi A1S PLC is the master controller for the system, it has enabled IEA and Camford to tune the operation very tightly. Now they can start the robot movement long before the press is fully open and start the press close cycle long before the robot arm is fully clear. At several seconds per cycle, this has saved a huge amount of time and enabled a dramatic production throughput increase. Prior to installing the ABB robots and the IEA control system, production was around 250 parts per hour, now production is up to 500+ parts per hour.

To start a production run the operator enters the part number into the menu on the MAC 90, and sets the number to be produced. The Mitsubishi A1S PLC then looks up the recipe for the product, checks that the correct die is installed, displays historical information about the product selected for the operator and then gets on with production. However, at around 8 tonnes each, if a die needs to be changed it is a major mechanical handling task that took 8 hours to carry out manually. Now with the newly installed quick die change system, the process, also controlled by the A1S PLC, takes just 30 minutes, and the reduced die change time allows far greater flexibility to respond to short term changes in customers' needs.

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Camford Pressings

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David Davis of Camford Pressings commented "My experience of IEA and the Mitsubishi control equipment they installed has been very good. They are professional, thorough, and they came up with the goods. I would have no hesitation in using their expertise again."

Application story first released October 1997 by Mitsubishi Electric UK