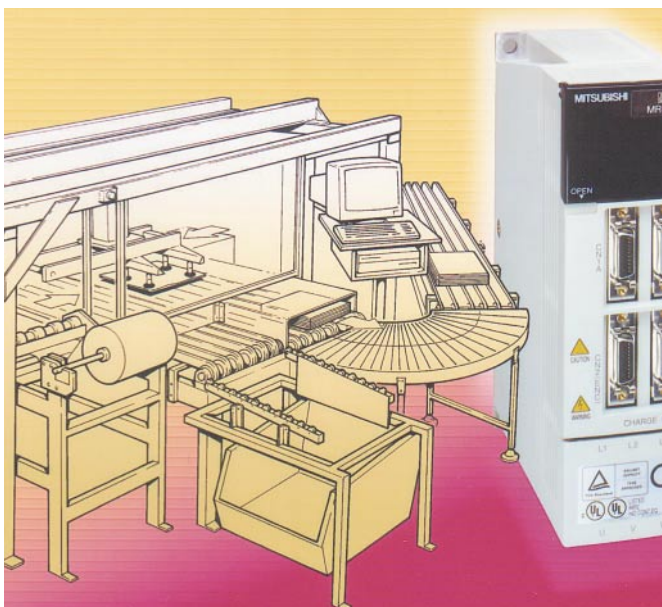


Industry: Materials Handling

Products Used: Servos /// Drives /// Modular PLCs

Glass - Handle with care

Mitsubishi Electric based control systems are providing the delicate touch required for stacking ultra-thin glass sheets at high production speeds, as they come off a float glass production line.



Pilkington's Deeside site has become a major supplier to manufacturers of laptop screens, watches, calculators and optical data storage systems. It is one of the few plants in the world capable of producing glass as thin as 0.4mm, which is perfectly flat and has an unblemished surface finish. The float glass technique, pioneered by Pilkington, is at the heart of the process, but stacking of finished product is so crucial that automation was a necessity.

Application story first released October 1999 by Mitsubishi Electric UK

The stacks have to be built with astonishing precision, as they are shipped to the Far East where automatic de-stackers require that the in-fed parts are picked from an exact location. The control systems also have the flexibility to cope with the variations required for multi-product manufacturing and the need to deal separately with the occasional reject before it is stacked and dispatched.

AMTRI, the North West's leading specialist in manufacturing machinery technology, was awarded the contract to design and build the handling systems. To supply the sophisticated control system AMTRI chose to use Mitsubishi Electric equipment as Mitsubishi were able to provide a total integrated motion package. The basis of the motion system are MR-J2 servo drives. To co-ordinate the interpolation of the servos A1SD75 positioning controllers were used, based in three AnS series PLCs.

Mitsubishi also supplied frequency inverter drives for the induction motors on the infeed and outfeed conveyors, as AMTRI and Pilkington were keen to realise the purchasing, technical and maintenance benefits of single sourcing the control equipment.

With the new equipment installed and running, Pilkington are confident of stacking 8,000,000 sheets of glass a year, each one perfect, and each one perfectly stacked and ready to be automatically unstacked when it arrives at Pilkington's customers.