Taiwanese machine manufacturer Chuan Lih Fa Machinery Works (CLF) has been manufacturing injection molding machines since 1966, with steadily growing success. In order to remain competitive in the world market, CLF was looking for a complete solution for its AE series of fully electric injection molding machines. It found a perfectly aligned automation solution in the Siemens IMe 5000. At the heart of the IMe 5000 are the Simotion D435/445 drive-based motion control system and the Sinamics S120 drive system. Communication is facilitated by Drive-CLiQ. Integrating Siemens 1FT6 and 1FK7 standard motors into the solution further improved the functionality of the machines so they perfectly matched CLF’s requirements. In March 2010, 230- and 450-ton injection molding machines with the new Siemens automation technology were unveiled at the Taipei PLAS plastics technology trade fair in Taiwan. The machines were awarded the fair’s first prize for innovation.

A customized automation solution improves both the functionality and the competitiveness of injection molding machines from Taiwan.

Reduced costs and processing times
CLF’s AE series of fully electric injection molding machines are particularly suited to the manufacture of optical glass and components such as thin-wall light guide plates (LGPs). The new IMe 5000 automation solution allows low- and high-speed injection molding, which means that the specific requirements for optical components can be more than adequately met. The two-motor synchronization means that the injection unit can reach a maximum injection speed of 600 millimeters per second. The simultaneous multiaxis control drastically reduces processing times, and therefore also the manufacturing costs, for thin-wall production. What’s more, energy consumption can be reduced by over 15 percent thanks to energy recovery in the drive system. Combined, these benefits have noticeably increased the CLF machines’ competitiveness.

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