

Success Story

Industry Segment: **Automotive**

Windshield Manufacturing Plant - Retrofitting Integrated Automated Production Process Control



The Customer

A French MNC, originally a glass manufacturer, it is now, also a producer of construction and high performance materials. In India, the customer established its presence by acquiring a majority stake in an existing engineering company. The group currently operates in 3 business sectors: flat glass, high performance materials and construction products.

The Application: Glass Manufacturing Plant - Automation

In 1996, when the Indian company was taken over by the French MNC, there was a thrust on bringing in state-of-the-art manufacturing methods into their then existing production facilities in Pune. The French MNC planned to replicate their standards that existed back home in France. Since it was Schneider's technological support that was the base of their world class facility in France, Schneider's solutions were preferred in India as well.

"An Indian company achieving this level of automation in an economical and user-friendly manner gives us lots of options for the future."

The manufacturing process of glass involves a series of steps, wherein the raw material is taken to different activity zones, that include

- Furnace for extreme heating
- Press for creating a tight atomic structure and to increase the density of the product
- Cooling for quenching, to impart hardness to the finished product

A transporter is the crucial guide that leads the material through the entire series of steps. It takes the raw material to these different zones and decides at what time the process begins and ends at each stage. While this core process remains the same, different varieties of glass have different process times at the respective activity zones. FCS was chosen as the solution partner.

The Solution

FCS solution components included:

- Axis position control enabled by AC servo motors
- Normal motors control enabled by variable frequency drive
- Programmable Logic Controller and graphic HMI

It was the first time in India that Schneider's Axis Control product was used. The entire gamut of products, including graphic terminal and optical encoder were used thus displaying true integration.

The Challenge

Glass manufacture was an unknown domain, for FCS. It was on the strength of an earlier relationship with the projects team at the erstwhile Indian company, that FCS was chosen to be the solution provider. The confidence that the team had in FCS was simple "FCS can do!"

These few words inspired TeamFCS no end. For over 20 days, we literally shifted base to Pune.

Glass manufacture involves a process that has to be precise in terms of value add at every stage. And every stage involves several sub-operations that need to take place with tick-tock efficiency. To understand the linkages of the entire line of processes most intricately and to map them in our automation solution, is an achievement we are proud to have delivered.

The Benefits

- Rejections drastically reduced
- Improvement in quality
- Dramatic enhancement in quality
- Delivery schedules under control
- Significant improvement in customer confidence levels as a result of greater control in production processes

We also offer the following:

- **Soft Starters**
- **Variable Speed Drives (VFD)**
- **Switch Mode Power Supplies (SMPS)**
- **Pressure Switches**
- **LCD Touchscreen Displays**
- **PLC and SCADA Software**
- **Complete Application Solutions**
- **Control Panels**

For more information on any or all of these products, or to speak to our technical representatives regarding your specific application, please call or write to us at the address given below.