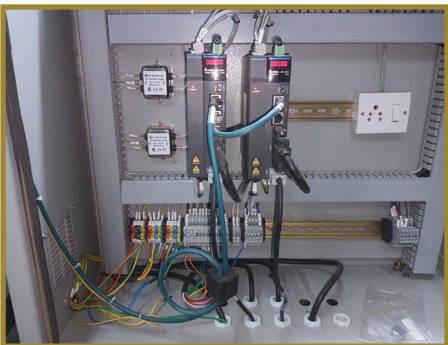# Filter Manufacturing in Refineries & Reactors

Shriram Automation and Horner's XL7

Filter Manufacturer Project,
Thane, Maharashtra, India

Control panel with XL7
and accessories used

CHALLENGE

Shriram Automation is a system integrator for Horner India. A client of theirs is a filter manufacturer for refineries and reactors. These filters are made from fine-wire mesh. They have designed a new filter that is made of fine copper wires. A surface grinding process is done on these filters' top and bottom sides.

OPPORTUNITY

For this process, they required a special-purpose surface grinding machine. The filters are circular. The machine must be able to grind as per the shape of the filter. A multi-positioning system is required to do this. The client decided to build an SPM for this in-house. For the control part, they approached Shriram Automation and asked us to design a suitable control for the machine. After understanding the application, we decided to use an X and Y gantry with servo motors and the Horner XL7 OCS for the application.

SOLUTION

The Horner XL7 model 4 was a perfect solution for this application. It has multiple onboard IO and a CANopen port, with a 7" touch screen. Two Delta A3 Series drive and servo motors were used for the gantry. A CANopen communication was used between the XL7 and the A3 drives. We used the CANopen DS402 profile for performing the motion control.

As it was a multi-positioning system, there were many X and Y coordinates, and large amounts of memory were required to store them. The operator also required the flexibility of accessing and changing them from the HMI screens. All of these challenges were easily achieved with the XL7 OCS. The XL7 has a user-friendly CANopen communication, and it has 50000 registers, which are enough to store the coordinates. Also, these registers can be accessed through the HMI giving the operator the flexibility to change them.

HORNER
AUTOMATION GROUP

Copper wire filter system

Horner XL7 controller

Try WebMI and the Horner app for remote access

TESTIMONIAL

"Horner OCS is a very good solution if you need to communicate with different third-party devices. It has a user-friendly configuration in Cs-cape. The canopen configuration is very simple, which I have not seen in any other brands. Other protocols, like Modbus TCP, Modbus RTU, and J1939, are also very easy to configure."

~ Sunit Gupte, Shriram Automation