



Case study

CALCIUM SILICATE / FIBRE CEMENT BOARD MANUFACTURING

From electrical panels and mechanical silos to fuzzy logic software, from integration of PLC system with imported machinery to web based Head Office control room for 9 plants, Autosys can undertake complete turnkey end to end plant automation.

END TO END PLANT AUTOMATION

The typical value of a green field project of this nature is Rs 75 Million (excluding Civil). Retrofitting the automation system in existing plants will require a budget of about Rs 3 Million.

This is a sample project that show cases our multi-disciplinary expertise and the ability to execute fixed price contracts on a large scale at any location in India.

The customer is a leading player in calcium silicate and fibre cement boards. The thickness of the board has to be uniform and hence process control is very critical.

First the raw materials stored in storage silos are automatically and accurately batched using weigh hoppers. The batched materials are then fed in to a slurry mixer followed by a density control tank. Recycle water / material is added in a controlled manner to ensure uniform density of the slurry. The board thickness measurement system provides the necessary input through a fuzzy logic to control the slurry density.

The slurry then is fed through a vacuum based system that converts the slurry in to a sheet and cuts them to specified sizes.

The sheets are then handled through an automatic pick and place robot, placed on templates and passed through a temperature controlled drier. The sheets from the drier are separated from the template and stacked for shipment.



**COMPLIMENTING
PRODUCT**

Xeleer

**AUTOMATIC
DOSING
SYSTEM**

For Fibres
Accuracy : +/- 20 g
Batch size : 1-5 kg
Cycle time : 30 seconds

MCC
Panels

SCADA
Software

RM Silos
& Weigh
hoppers
(10+7)

PLCs

Real time monitoring,
Auto email reports,
Web view interface

Automatic
Fibre
Dosing

Board
Thickness
Measurement

Slurry-
Water Ratio
control

5000 Amps, Incoming,
DG Sync, APFC Panels,
152 Motor Controls
200 KW to 1.5 KW,

VFD
drives

HO Control
room
(for 9 such
plants)

PLCs, PLC panels,
Control Desks,
PLC software,
Fuzzy Logic controls

Integration
with imported
machines



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