

Control system design

for parallel batch mixtures and continuous flows in chemical process.

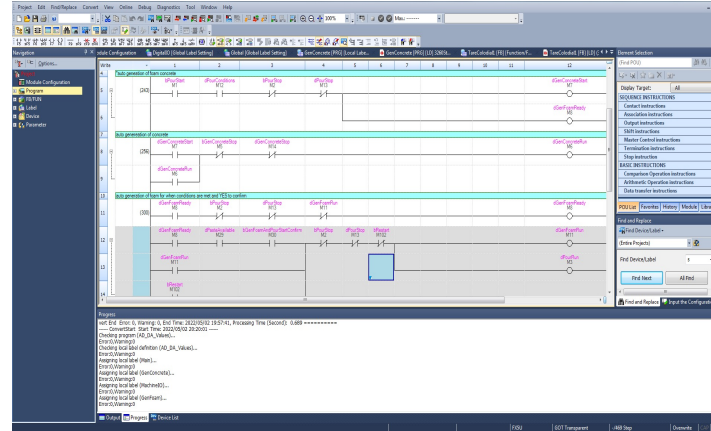
Thesis carried out in collaboration with with a company based in Linköping. The company is set out to produce a scaled up machine based on a prototype. A framework for the control system of the scaled up machine was needed.

Specs for scaled up machine:

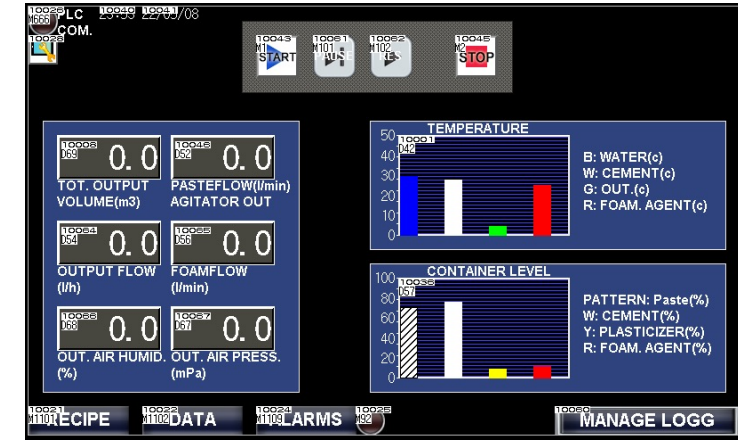
- Revised HMI
- Higher output capacity
- Decreased operator workload
- Improved quality control

Compiled in Mitsubishi software:

- GX Works 3
- GT Designer 3
- ...utilizing:
- Ladder
- Structured text

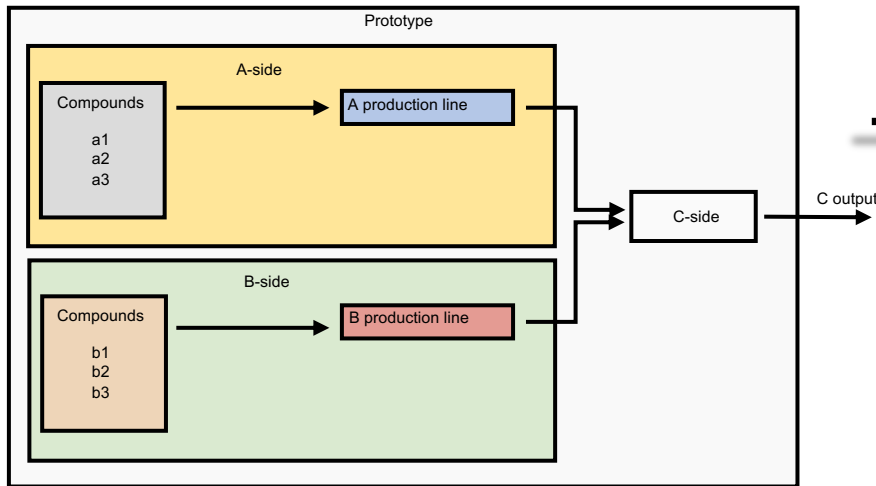


Compiler, GX Works 3

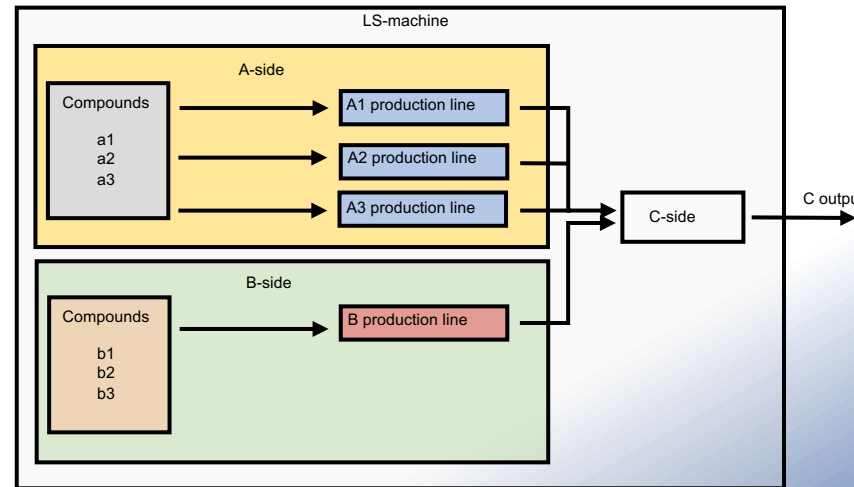


Straightforward and efficient HMI-experience.

OLD DESIGN



NEW DESIGN



New design containing:

- Parallell production lines
- Improved HMI, pictured above
- Alarm functions
- Logg function
- Recipe handler
- Additional sensors; pressure, temperature, flow and mass
- Increased output