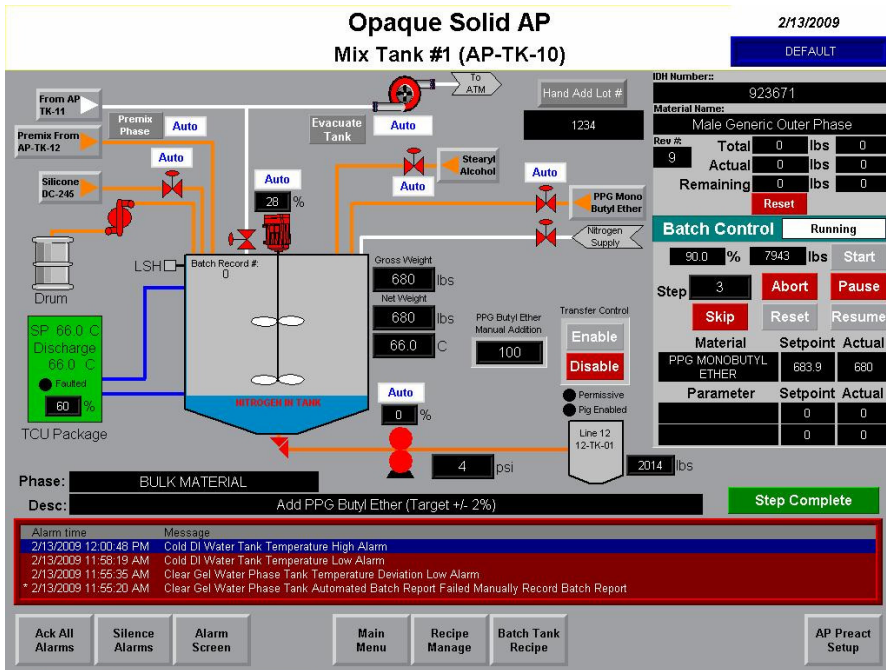


Control Masters Application Case Study

CMI Batch Control and Information System



Technologies

- Rockwell ControlLogix PLC
- Rockwell FactoryTalk View ME
- Rockwell RSSQL
- Rockwell PowerFlex 70 Drives
- Microsoft SQL Server
- Microsoft Access
- ISA S88 Style Recipes
- Batch Reports

Services Provided

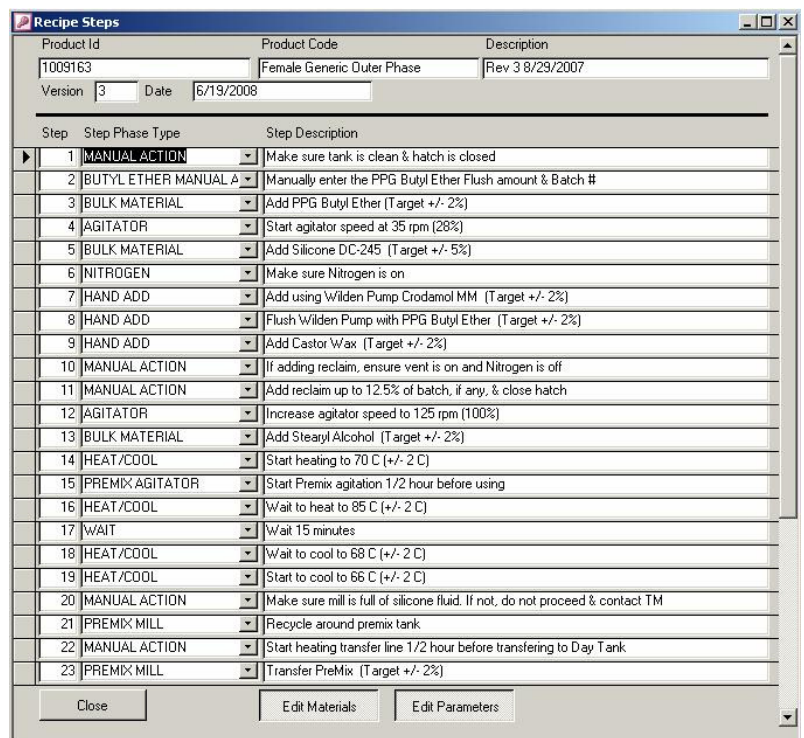
- Functional Specification Document
- PLC Integration
- Electrical Engineering
- Network Design
- Control Panel Design & Fabrication
- Process Simulation
- Startup & Commissioning
- Remote VPN Support

Project Description

Antiperspirant deodorant is produced in one of eleven 1,000 gallon batch tanks. The recipes are stored in Microsoft SQL server, edited using a Microsoft Access front end application and downloaded to the PLC for storage and execution. The PLC stores the 60 most common recipes in memory for quick execution by operations during the week.

Once the recipes are stored in the PLC, the batch process is entirely controlled with the 1756-L63 ControlLogix PLC and Panelview Plus operator interface. Operators have full control of the batch being able to start, stop, pause, resume and abort the batch as well as manual operation of each of the phases.

During batching, data is logged back to the SQL server using RSSQL for batch reports and material tracking.



Step	Step Phase	Type	Step Description
1	MANUAL ACTION		Make sure tank is clean & hatch is closed
2	BUTYL ETHER MANUAL A		Manually enter the PPG Butyl Ether Flush amount & Batch #
3	BULK MATERIAL		Add PPG Butyl Ether (Target +/- 2%)
4	AGITATOR		Start agitator speed at 35 rpm (28%)
5	BULK MATERIAL		Add Silicone DC-245 (Target +/- 5%)
6	NITROGEN		Make sure Nitrogen is on
7	HAND ADD		Add using Wilden Pump Crodamol MM (Target +/- 2%)
8	HAND ADD		Flush Wilden Pump with PPG Butyl Ether (Target +/- 2%)
9	HAND ADD		Add Castor Wax (Target +/- 2%)
10	MANUAL ACTION		If adding reclaim, ensure vent is on and Nitrogen is off
11	MANUAL ACTION		Add reclaim up to 12.5% of batch, if any, & close hatch
12	AGITATOR		Increase agitator speed to 125 rpm (100%)
13	BULK MATERIAL		Add Stearyl Alcohol (Target +/- 2%)
14	HEAT/COOL		Start heating to 70 C (+/- 2 C)
15	PREMIX/AGITATOR		Start Premix agitation 1/2 hour before using
16	HEAT/COOL		Wait to heat to 85 C (+/- 2 C)
17	WAIT		Wait 15 minutes
18	HEAT/COOL		Wait to cool to 68 C (+/- 2 C)
19	HEAT/COOL		Start to cool to 66 C (+/- 2 C)
20	MANUAL ACTION		Make sure mill is full of silicone fluid. If not, do not proceed & contact TM
21	PREMIX/MILL		Recycle around premix tank
22	MANUAL ACTION		Start heating transfer line 1/2 hour before transferring to Day Tank
23	PREMIX/MILL		Transfer PreMix (Target +/- 2%)