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Give an isa-88 batch control recipe of a typical paint production. Formulate steps a IEC 61131-3 ST programs, not function blocks.

Here's an example ISA-88 batch control recipe for a typical paint production process, along with corresponding IEC 61131-3 Structured Text (ST) program steps:

ISA-88 Batch Control Recipe:

1. Charge raw materials into mixing tank
2. Mix ingredients for specified time
3. Add pigment to mixture and continue mixing
4. Adjust pH to desired level
5. Add solvent to mixture and continue mixing
6. Transfer mixture to storage tank
7. Repeat steps 1-6 for additional batches
8. Perform quality checks on finished product before releasing for distribution

IEC 61131-3 ST Program Steps:

Step 1:
LD NOT Charging_Tank_Level_High // check if charging tank is not full
AND Charging_Tank_Valve_Open // check if valve is open
AND Raw_Materials_Flow_Rate > 0 // check if raw materials are flowing
THEN
Open_Charging_Tank_Valve // open charging tank valve
END_IF

Step 2:
LD Mixing_Time < Mixing_Time_Setpoint // check if mixing time is less than setpoint
AND Mixing_Valve_Open // check if mixing valve is open
THEN
Start_Mixing // start mixing
ELSE
Stop_Mixing // stop mixing
END_IF

Step 3:
LD Pigment_Flow_Rate > 0 // check if pigment is flowing
AND Pigment_Valve_Open // check if pigment valve is open
AND Mixing_Time >= Pigment_Mixing_Time // check if enough mixing time has passed for pigment
THEN
Add_Pigment // add pigment to mixture
END_IF

Step 4:
LD pH_Sensor_Value < Desired_pH_Value // check if pH is less than desired value
AND pH_Control_Valve_Open // check if pH control valve is open
THEN
Adjust_pH // adjust pH to desired level
END_IF

Step 5:
LD Solvent_Flow_Rate > 0 // check if solvent is flowing
AND Solvent_Valve_Open // check if solvent valve is open
AND Mixing_Time >= Solvent_Mixing_Time // check if enough mixing time has passed for solvent
THEN
Add_Solvent // add solvent to mixture
END_IF

Step 6:
LD Mixing_Time >= Mixing_Time_Setpoint // check if mixing time is greater than or equal to setpoint
AND Transfer_Valve_Open // check if transfer valve is open
THEN
Transfer_Mixture_To_Storage_Tank // transfer mixture to storage tank
END_IF

Step 7:
LD Batch_Number < Number_Of_Batches // check if batch number is less than total number of batches
THEN
Goto_Step_1 // go back to step 1 to start next batch
END_IF

Step 8:
LD Quality_Check_Result = "Pass" // check if quality check result is "Pass"
THEN
Release_For_Distribution // release finished product for distribution
ELSE
Reject_Product // reject product and perform corrective action
END_IF