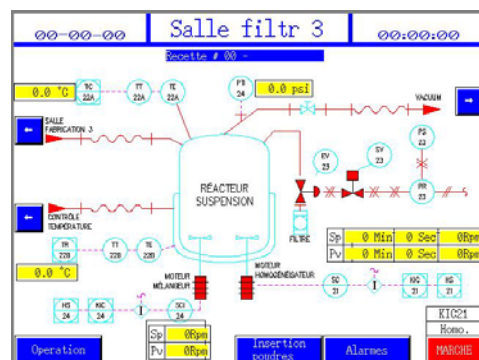


REALISATIONS

- Validation (IQ/OQ) and start-up of pharmaceutical equipment ;
 - MAR19 Aseptic filler (Allen-Bradley);
 - MAR52 Aseptic filler with Capper and Tray Loader (Allen-Bradley);
 - Steriline Vial Washer and Sterilizing Tunnel (Allen-Bradley & Ifix);
 - Eisai Particulate Inspection Machine (Allen-Bradley et Wonderware InTouch);
 - Dividella Cartoner (Allen-Bradley);
 - Mediseal Thermoformer (B&R);
 - Mediseal Cartoning Machines (B&R);
 - Libra Labellers (Allen-Bradley).

- Design and Fabrication of Control Panel of Manufacturing Tank Reactor;
 - Automation of process to link tank to existing Formulation Room control panel;
 - Instrumentation selection;
 - Electrical drawings design;
 - Omron PLC and HMI programming;
 - Electrical installation;
 - Start-up and Control System Validation.



- Modifications of MAR fillers to incorporate control of external recirculation pump and reactors;
 - Modify electrical schematics of 3 fillers and 2 reactors to be able to exchange equipment;

- Write calibration procedure;
- Electrical installation and start-up;
- Programming and Control System Validation.



- Elaborate a training plan for technicians on new equipments;

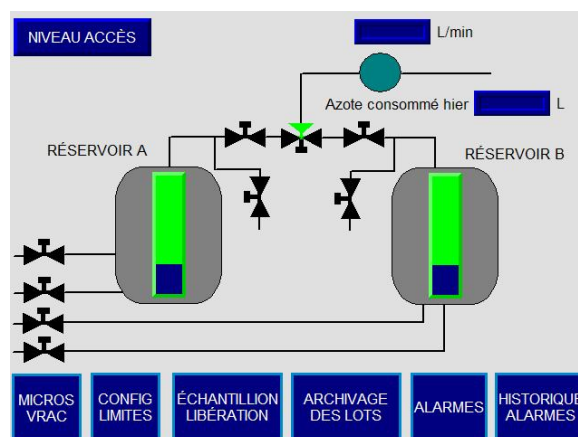
- Train electrical technicians on Eisai and MAR machines to help them in troubleshooting.



- Modify program of many aseptic fillers
 - Change access management on a Capmatic filler (Omron);
 - Add an encoder and bottle and stopper sensor on a Capmatic filler (Omron);
 - Add recipe storing capability on Cozzoli filler (Omron);



- Design and integration of a Vrac Nitrogen Supply System;
 - Electrical drawings;
 - Validation documents (FSDS, Tests Script);
 - Control Panel fabrication;
 - Installation and Start-Up.



- Integration of equipments for in-line installation (washers, inspection machines & labelers)
 - Electrical drawings;
 - Electrical installation;
 - Programming and validation for accumulation management and line output optimization.

- Add cameras for lot and expiration date inspection to replace contrast sensors.
 - Preliminary testing;
 - Electrical modification;
 - Allen-Bradley PLC and HMI programming;
 - Validation.



- Execution of Change Control of Automation Department
 - Functional and Design Specification redaction;
 - Impact of change evaluation;
 - FRA and RTM;
 - Redaction of required tests protocols;
 - Execution and support during validation.

- Modification of Differential Pressure Acquisition System to update points (Omron and Access)
 - Remove unused wiring;
 - Install new transmitters;
 - Calibration;
 - PC and PLC programming modification;
 -
- Correct deviations found during equipment qualification
 - Rewrite 50% of program of MAR52 line;
 - Synchronisation problem on Libra labelers;



- Steriline washer and tunnel
 - Modify program to minimize water in evacuation duct (Allen-Bradley);
 - Print air speed and temperature every 5 minutes (Ifix);
 - Add emergency stop buttons between washer and tunnel;
 - Change accumulation sensor type on tunnel inlet belt;
 - Write a URS to install an emergency supply on the control system;

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