HIGHLIGHTS:

ACC Automated Control Concepts **Smart solutions.**

KEDRION BIOPHARMA

ACC completely rebuilds the control system for the fractionation suite of Kedrion Biopharma, an international blood plasma company.

- New PLC and SCADA applications developed in accordance with modular approach.
- New network infrastructure.
- Upgraded server and client hardware.
- Built-in redundancy with automatic failover.

THE STARTING POINT

Kedrion Biopharma is an international company that collects and fractionates blood plasma to produce and distribute plasma-derived therapeutic products for use in treating serious diseases, disorders and conditions such as hemophilia and immune system deficiencies.

THE CHALLENGE

Kedrion Biopharma needed to completely rebuild their fractionation suite from the ground up. This provided the opportunity to also redesign the control system and network to meet the need for a flexible, modern and robust control system. A new network infrastructure was also required.

ACC'S SMART SOLUTION

After carefully reviewing the requirements and existing applications, ACC determined it was necessary to completely redevelop the entire PLC and SCADA program and hardware from scratch. A distributed system was designed that reduced the lengths of electrical and pneumatic runs. The distributed architecture included (8) remote I/O panels and (11) Ethernet-enabled pneumatic panels. (36) VFDs were to be controlled via a combination of hardwired I/O and ethernet. The network infrastructure (one SCADA network and (2) I/O networks) to support this distributed architecture was designed in close coordination with Kedrion Biopharma's IT resources.

Let's take a closer look at the project goals and resulting benefits.

REBUILDING THE ELECTRICAL ROOM

During the initial look into the Fractionation Suite, it was determined that the network infrastructure required a major overhaul. Partnering with Kedrion Biopharma's IT, we designed a new redundant network switch rack for all vendor PLC network connections to the main fractionation PLC. The result was a robust new network infrastructure, which was fully supported by the Kedrion Biopharma's IT team.

NEW ARCHITECTURE FEATURES REDUNDANCY AND SYSTEM INDEPENDENCE

In the past, when Kedrion Biopharma had to make batch system updates for either fractionation or medicine production the other process had to be put into manual control. ACC provided a solution to separate the two processes so that if updates were to be made on one system, the other production suite would not be affected in any way. This new architecture would now have redundancies built in for automatic failover saving the company in downtime costs moving forward. Most importantly, Kedrion Biopharma is now able to schedule downtimes, upgrades and more on one production suite without affecting the other.

BUILDING THE PLC APPLICATION

Utilizing the ACC object libraries to expedite the development process, ACC built a new PLC and HMI applications. We implemented a new user interface and Phase Manager batch sequences that were also derived from templates. ACC followed a modular approach based on S88 to develop a flexible system that suits the customer's current and potential future needs. This well thought out and more robust system with built-in redundancies will keep the plant running of years to come.