GreyLogix

c·vale

Efficient Integration in Cvale's New Soybean Oil Extraction Plant

Challanges

We faced significant challenges due to the scale of the project, remote development of panels with specific standards, and critical time management. Working in collaboration with Siemens, Mitsubishi, and Bilfinger Life Science GmbH also required effective communication and international coordination.

Benefits

The plant expansion will bring substantial improvements to Stockholm, including an increase in the supply of energy, heating, and hot water. This will directly benefit the residents and the city's infrastructure, contributing to a more efficient and sustainable environment.

Solution

To overcome the challenges, one of our coordinators traveled to Stockholm, working closely with partners such as Siemens, Bilfinger Life Science, and Mitsubishi. This personal involvement made it possible to accelerate the final stage of the project and ensure its successful completion.

GreyLogix

LONGPING HIGH-TECH
CITIC GROUP

Expansion and Efficiency: Supply and Supervision for Lines 3 and 4

Challanges

This project faced complex challenges, including contract management with multiple suppliers, direct billing of components and third-party services, and the execution of highly complex electrical projects. In addition, the assembly and field installation of more than 80 panel columns required meticulous attention.

Benefits

As a “turn-key” project, GreyLogix assumed responsibility for the quality of all materials and services, both those manufactured internally and those supplied by third parties. On-site supervision ensured the prompt resolution of unforeseen problems and challenges, contributing significantly to the efficiency and success of the expansion of Lines 3 and 4.

Solution

We provided a complete solution for the expansion of Line 3 and the construction of the New Line 4, including medium-voltage switchgears, transformers, bus ducts, and low-voltage panels such as QGBTs, capacitor banks, MCCs, and small breaker panels. We carried out detailed electrical designs, supervised the assembly of low-voltage panels, and coordinated the manufacturing of MV transformers, bus ducts, and MV switchgears by third parties. Field installation and commissioning were an integral part of our scope. This “turn-key” project ensured quality at every stage, driving the efficient expansion of Lines 3 and 4.

GreyLogix

Sepac
INOVANDO PARA O SEU CUIDADO

Increasing Efficiency and Availability: PCS7 Upgrade for Sepac

Challanges

The firmware of the VACOM Sdrives was modified and reprogrammed to interface with PCS7. We developed a communication block for drive synchronization, as well as improvements to existing logic and migration to a newer PCS7 version. The implementation of a virtualized system, the migration from the OEM library to the PCS7 standard library, and the unification of drive PLCs and logic were significant achievements.

Benefits

System virtualization increases maintenance agility and availability. The unification of PLCs reduces components subject to failure and simplifies communication between systems, decreasing the risk of downtime. With the updated and virtualized system, performance improved significantly, and the separation of hardware and software in the supervisory layer facilitates future upgrades. The use of a standard library simplifies maintenance, support, and migration, allowing SEPAC to have a more available workforce for system interventions.

Solution

The PCS7 upgrade project for Sepac's four Tissue Machines was successfully executed. Each machine was updated sequentially, with TM4 completed in December 2023, TM5 in January 2024, TM6 in April 2024, and TM3 in July 2024. We overcame complex technical challenges, including firmware modification of the VACOM Sdrives and integration with PCS7. The migration to a virtualized system, the unification of PLCs, and the software upgrade resulted in greater efficiency, availability, and ease of maintenance. This achievement marks a significant milestone in improving Sepac's operations.

GreyLogix suzano

Enhancing Safety and Availability: Supply and Programming for Suzano Cerrado

Challanges

This project faced unique challenges, including aligning logic with the team in Finland, integrating Siemens PCS7 and Yokogawa through protocol, programming safety logics, and dealing with the bureaucratic import process. In addition, the implementation of the redundant system added further complexity to the project.

Benefits

The benefits for the client are remarkable. The implementation of safety logic improved system safety, while the redundant configuration increased availability. Our highly skilled technical team, both in software and in English, enabled efficient alignment with the Finnish team, resulting in a successful project.

Solution

The Factory Acceptance Test (FAT) of the RB/PB and WSA was carried out just two weeks ago at GreyLogix's facilities. This test proved the effectiveness of our solution. We overcame integration challenges, protocol complexities, and import bureaucracy to deliver a safe and redundant system. The collaboration between our teams and Suzano Cerrado was fundamental to the success of this project, and we look forward to delivering more high-level solutions in the future.

Inverter Upgrade at Veracel: Modernization in a Pulp Plant with Savings and Reliability

Challanges

As a retrofitting project, it was necessary to maintain the positions of the drives and adapt them to the existing loads, both in the PLC programming and in the inverters. Initially, there was an expectation to replace everything—that is, substitute the entire panel and sheet metal, in addition to readjusting power and control cables. However, after the second field survey, there was a turning point.

Solution

Keeping the positions of power supply, control, and motor output cables exactly the same as the existing setup, and in the smaller inverters (up to 200 kW) retaining the same sheet metal while only replacing the inverter and accessories. This engineering solution from GreyLogix resulted in significant savings for the client.

Benefits

The replacement of the obsolete MASTERDRIVES inverters with SINAMICS G130 provided greater confidence in critical positions with respect to:

- Labor for cable replacement;
- Power and control cables;
- Various interferences during the shutdown;
- Approximate savings of R$ 3 million;
- Equipment with new MTBF - more reliability in the plant's most critical positions;
- More diagnostics in the inverters;
- Shorter replacement time for inverters;
- Lower cost than expected by the client;
- Less labor required (lower risk of accidents).

GreyLogix BILFINGER

Expansion of the power generation plant in Stockholm

Challanges

We faced significant challenges due to the scale of the project, remote development of panels with specific standards, and critical time management. Working in collaboration with Siemens, Mitsubishi, and Bilfinger Life Science GmbH also required effective communication and international coordination.

Benefits

The plant expansion will bring substantial improvements to Stockholm, including an increase in the supply of energy, heating, and hot water. This will directly benefit the residents and the city's infrastructure, contributing to a more efficient and sustainable environment.

Solution

To overcome the challenges, one of our coordinators traveled to Stockholm, working closely with partners such as Siemens, Bilfinger Life Science, and Mitsubishi. This personal involvement made it possible to accelerate the final stage of the project and ensure its successful completion.

GreyLogix BILFINGER

Automating Efficiency: Tempering of Automotive Battery Terminals in South Korea

Challanges

This project faced challenges with the decentralization of engineering work, different time zones, conflicting information between manufacturer and automation, commissioning in an Asian country with a distinct culture, and diverse teams. The lack of planning and prolonged commissioning were also obstacles.

Benefits

The GreyLogix automation team brought its vast field experience to the project, providing organization in software programming and significant improvements. This resulted in a more efficient and reliable solution for the battery terminal tempering process in South Korea, contributing to the success of the industrial plant.

Solution

We worked in close collaboration with Bilfinger Germany since December 2022 to develop the automation, interfaces, and testing of the battery terminal tempering process in an industrial plant in South Korea. We completed the software by April 2023 and commissioned the PSK and CVI lines in South Korea, managing the field team remotely. We faced challenges such as time zone differences and commissioning in an Asian country, but our experienced team brought organization and improvements that benefited Bilfinger and Onejoon, resulting in a more effective and reliable solution.

GreyLogix

CNPEM
Centro Nacional de Pesquisa em Energia e Materiais
ORGANIZAÇÃO SOCIAL DO MCTI

Enhancing Operations: WinCC Unified Supervisory Upgrade for LNLS

Challanges

This project faced significant challenges, including updating all operation screens in the METROLOGY areas and in the SIRIUS accelerator, using the lesser-known WinCC Unified platform. In addition, developing complex functions (scripts) entirely remotely was a demanding task.

Benefits

The successful upgrade of the supervisory systems in the METROLOGY and SIRIUS areas brought numerous benefits to LNLS. The systems are now fully integrated with automation, providing greater reliability, availability, and safety for the operation of the particle accelerator and associated areas. This upgrade represents an important milestone in enhancing the operation of the Brazilian Synchrotron Light Laboratory (LNLS).

Solution

We carried out a comprehensive upgrade of the LNLS WinCC Unified supervisory system, focusing on METROLOGY (Phase 1) and the SIRIUS accelerator (Phase 4). This project involved updating all operation screens and developing complex functions (scripts) entirely remotely. The result was full integration of the systems with automation, providing greater reliability, availability, and safety for the operation of the particle accelerator and joint LNLS areas. This achievement is a significant step toward operational excellence.