

LIFE 2 IMPROVE – PERFORMANCE OPTIMIZATION BOOK YOUR PERFORMANCE COACH

CASE STUDY

Auxiliary Systems: Optimization and renewal of additive systems for a paper machine producing kraft paper



Introduction

During the conversion of a paper machine from graphic papers to kraft paper for packaging at an Austrian production site, GAW technologies was tasked with renewing the complete unloading storage and dosing systems of the auxiliaries for the wet end system.

The original systems no longer met current safety and environmental standards and required urgent modernization.

Task and Problem Description

The main objective was to upgrade and renew the existing auxiliary systems to not only comply with relevant standards but also elevate them to the latest state of the art with minimal expense.

This included meeting safety and environmental requirements while improving system efficiency and reliability.

Results and Benefits

COMPLIANCE WITH SAFETY AND ENVIRONMENTAL STANDARDS



All systems were updated to meet all relevant safety and environmental regulations.

OPTIMIZED EFFICIENCY



The replacement of automation and electrical systems and the modernization of the systems significantly increased efficiency, leading to better resource utilization and higher productivity of the paper machine.

COST EFFICIENCY



The project was carried out with minimal financial expenditure by reusing or optimizing existing components whenever possible.

FUTURE-PROOF



The systems are now up to date for the coming years, providing a solid foundation for further modernizations or adjustments.



Approach and Solution:



Step 1: On-Site Assessment and Analysis

Two GAW Performance Coaches conducted a comprehensive on-site analysis of the existing systems. Technical, safety-related, and environmental deficiencies were documented, and an initial plan for the necessary measures was developed. This step was crucial to understanding the existing infrastructure and setting the right priorities.

Step 2: Risk Analysis and P&ID Creation

A detailed risk analysis was conducted jointly with the customer to identify potential hazards and take appropriate measures. In parallel, P&IDs (Piping and Instrumentation Diagrams) were updated to refine system planning and ensure optimal communication between all systems.

Step 3: Optimization and Renewal of the Systems

The project aimed to optimize the existing systems with minimal financial effort. Technical systems were updated, and inefficient or outdated components were replaced. Key measures included replacing the entire automation and electrical systems with modern Siemens S7 PLC controls and using Siemens drive technology to enhance system efficiency and flexibility.

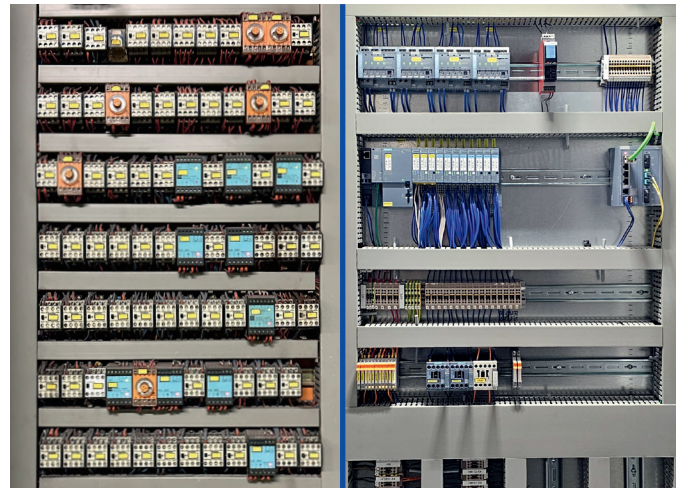
Step 4: Complete System Planning

GAW took over the complete planning of the new systems, from design to material selection. Particular attention was paid to economical implementation to keep investment costs low while ensuring high performance and durability of the systems.

Step 5: Installation and Commissioning

Following the planning phase, experienced GAW technicians and engineers supervised the installation. All new components were installed, and the entire system was thoroughly tested. Subsequent commissioning took place after intensive fine-tuning to ensure smooth and efficient operation of the machines.

Before / Then



Conclusion

The successful implementation of the optimization and renewal measures significantly improved the production facility. The project demonstrated how targeted modernizations with a well-thought-out approach can achieve significant efficiency gains and long-term cost savings while meeting all safety and environmental requirements