CASE STUDY

Instron Technologies
INNOVATE TO IMPROVISE

Energy Saving in Hydraulic Press

Achieved 30% energy savings in press machines, enhancing efficiency, cutting costs, and driving sustainable manufacturing.

Industry

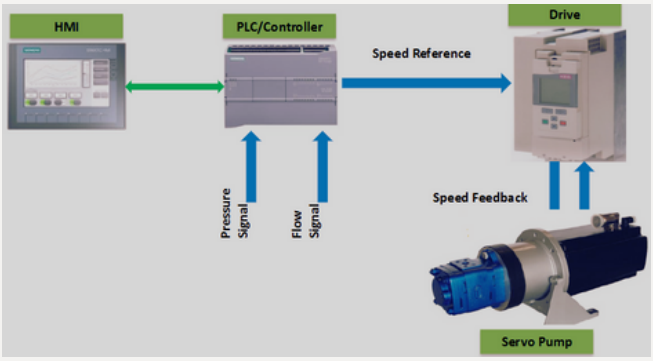
Automotive Industry

Client Summary

Our client, a leading name in the wheel manufacturing industry, has been a trusted player for over six decades. With a strong workforce of skilled professionals, they specialize in producing high-quality steel and aluminum wheels for passenger cars, commercial vehicles, agricultural tractors, and construction equipment. Their advanced manufacturing facilities cater to both domestic and international markets, ensuring superior quality, safety, and performance in every product.

Highlights

- Installing complete package of Servo Drive, Servo Motor and Internal Gear Pump.
- PLC controller processes feedback and reference signals and converts them to Torque and speed commands for Motor which finally controls flow and pressure of Pump.



Challenges

- **High Noise Levels:** Excessive operational noise can lead to workplace discomfort and potential compliance issues with safety regulations.
- **Continuous Motor Operation:** The motor must run constantly at the same speed, leading to increased wear and reduced flexibility in process adjustments.
- **Low Energy Efficiency:** High energy consumption results in increased operational costs and a larger environmental footprint.
- **Fixed Stroke Length:** Limited adaptability due to a predefined stroke length, restricting operational versatility.
- **Short Operational Lifespan:** Components experience faster wear and tear, leading to frequent maintenance and higher replacement costs.

Project Success Factors

- **Energy Efficiency:** Achieved 30% energy savings, reducing operational costs and environmental impact.
- **Stable Pressure Control**: Ensured consistent and precise pressure holding for enhanced process reliability.
- **Noiseless Operation:** Significant reduction in noise levels, creating a safer and more comfortable work environment.
- **Increased Productivity:** Optimized cycle times, leading to faster operations and improved output efficiency.
- **Reduced Hydraulic Power Loss:** Improved system efficiency with minimal energy wastage.
- **Lower Hydraulic Oil Temperature:** Enhanced thermal management, reducing wear and extending system longevity.
- **Adjustable Stroke Length**: Greater flexibility in operation, accommodating different process requirements.

About Instron Technologies

With operations in India and Canada, Instron Technologies is a leader in Process Skid Plants, Digital Factory Solutions, Test Bench Systems, and Automation Solution Committed to sustainability, our dynamic team develops innovative solutions that not only meet critical customer challenges but also emphasize eco-friendly practices. Serving over 200 clients in more than 10 countries, we demonstrate our dedication to innovation, operational efficiency, and environmental responsibility.

Contact Us for More Details

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