

# Industrial Data Analysis Report

## Executive Summary

This report provides an analysis of key performance indicators (KPIs) for the industrial operations between September 30, 2024, and October 14, 2024. The average working time during this period was 19053.31 units, with significant idle time and offline time. The consumption, power usage, and associated costs were relatively low, indicating efficient operation. The production metrics show a good number of cycles, with a high power efficiency and low production cost per unit. However, there were a few bad cycles impacting the overall performance.

## Key Performance Indicators (KPIs)

The following table summarizes the KPIs for the industrial operations:

KPI   Value	-----	-----	Working Time   19053.31	Idle Time   10560.23	Offline Time   768.08	
Consumption   0.00151	Power   0.00301	Consumption (Working)   0.00214	Consumption (Idle)   0.00073	Cost   0.00092	Cost (Working)   0.00159	Cost (Idle)   0.00048
Cycles   0.69333	Good Cycles   995.29	Bad Cycles   2.97	Average Cycle Time   9.63	Production Cost per Unit   0.00132	Energy Consumption per Unit   0.00216	Power Efficiency   1306801950.23
Power Distribution Loss   -3296.50	Production Rates   0.000048					

## Trends and Observations

- The industrial operations had a significant amount of idle time, which could be optimized to improve overall efficiency.
- The power efficiency was high, indicating that the machinery utilized power effectively during the production process.
- The average cycle time was relatively low, suggesting a streamlined production process.
- There were a few bad cycles that impacted the overall performance metrics.
- The production cost per unit was low, indicating cost-effective manufacturing processes.

## Recommendations

Based on the analysis, the following recommendations are suggested to further improve industrial operations: 1. Optimize scheduling to minimize idle time and maximize production efficiency. 2. Investigate and address the root causes of bad cycles to reduce their occurrence. 3. Continuously monitor and maintain the high power efficiency levels to control operational costs. 4. Implement measures to further reduce the production cost per unit without compromising quality.

## Data Appendix

- Start Date: September 30, 2024
- End Date: October 14, 2024
- KPIs:
- Working Time: 19053.31
- Idle Time: 10560.23
- Offline Time: 768.08
- Consumption: 0.00151
- Power: 0.00301
- Consumption (Working): 0.00214
- Consumption (Idle): 0.00073
- Cost: 0.00092
- Cost (Working): 0.00159
- Cost (Idle): 0.00048
- Cycles: 0.69333
- Good Cycles: 995.29
- Bad Cycles: 2.97
- Average Cycle Time: 9.63
- Production Cost per Unit: 0.00132
- Energy Consumption per Unit: 0.00216
- Power Efficiency: 1306801950.23
- Power Distribution Loss: -3296.50
- Production Rates: 0.000048

This report provides valuable insights into the industrial operations during the specified period, highlighting key areas for improvement and optimization.