

Enhancing Operational Efficiency through Production Planning and Control: A Case Study on Ashu Organics Pvt. Ltd.

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Abstract

Effective production planning and control (PPC) are the pillars of operational efficiency in manufacturing. This study explores the PPC process at Ashu Organics Pvt. Ltd., highlighting its strategies, challenges, and outcomes. By examining real-world operations, the research identifies best practices and provides actionable insights to optimize resource use, reduce costs, and improve product quality.

Keywords:

Production Planning, Operational Efficiency, Supply Chain Management, Quality Control, Scheduling, Inventory Management, Manufacturing Optimization, Process Improvement, Resource Utilization, Sustainable Manufacturing.

Introduction

Production planning and control ensure that manufacturing processes run smoothly, delivering products efficiently and on time. At Ashu Organics Pvt. Ltd., the PPC system is designed to cater to a global market while adhering to high standards of quality and sustainability. This study sheds light on their methodologies and evaluates their impact on organizational performance.

Objectives of the Study

1. To analyze the steps involved in production planning and control.
 2. To identify challenges faced in the manufacturing process.
 3. To explore strategies for improving efficiency and reducing operational costs.
 4. To evaluate the role of PPC in ensuring sustainability and customer satisfaction.
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Research Methodology

- **Data Collection:**
 - Primary: Internship observations at Ashu Organics Pvt. Ltd.
 - Secondary: Analysis of industry reports, textbooks on operations management, and company publications.
 - **Approach:** Qualitative and case study-based, focusing on real-world applications of PPC.
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Findings and Discussion

Steps in Production Planning and Control

1. **Planning:** Establishing the material, manpower, and machinery requirements to meet production goals.
 2. **Routing:** Defining the optimal sequence of operations to minimize waste and ensure efficiency.
 3. **Scheduling:** Assigning timelines to tasks for a seamless production process.
 4. **Loading:** Allocating work across available resources based on capacity.
 5. **Dispatching:** Implementing production plans on the shop floor.
 6. **Inspection and Quality Control:** Ensuring adherence to quality standards.
 7. **Expediting:** Monitoring progress and addressing delays proactively.
 8. **Correction:** Making necessary adjustments to resolve inefficiencies.
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Challenges in Production Planning and Control

- Fluctuating raw material prices and availability.
 - Balancing cost efficiency with high-quality production.
 - Managing waste disposal and meeting environmental regulations.
 - Addressing equipment downtime and ensuring uninterrupted production.
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Impact of PPC at Ashu Organics Pvt. Ltd.

1. **Enhanced Efficiency:** Optimized use of manpower and resources led to higher productivity.
 2. **Cost Reduction:** Streamlined processes minimized waste and reduced overheads.
 3. **Improved Quality:** Strict adherence to quality control standards built customer trust.
 4. **Sustainability:** Environmentally friendly practices minimized the ecological footprint.
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Conclusion

Production planning and control at Ashu Organics Pvt. Ltd. have significantly contributed to operational excellence. By addressing challenges like raw material variability and regulatory compliance, the company has established itself as a reliable player in the specialty chemicals industry.

Recommendations

1. Invest in automation to enhance process efficiency and minimize human error.
 2. Develop robust supply chain partnerships to mitigate raw material fluctuations.
 3. Introduce advanced scheduling software for better resource management.
 4. Focus on employee training to improve skills and adaptability.
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