

RAW MATERIALS WAREHOUSE IMPROVEMENT  
IN A MECHANICAL COMPONENT MANUFACTURING PLANT

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A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Engineering Program in Engineering Management

The Regional Centre for Manufacturing Systems Engineering

Faculty of Engineering

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การปรับปรุงคลังวัตถุดิบในโรงงานผลิตชิ้นส่วนจักรกล



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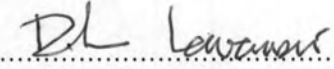
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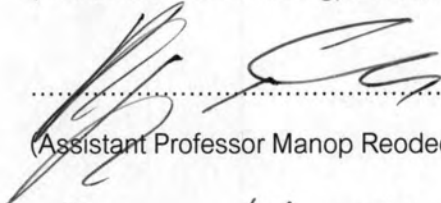
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สุข เย การปรับปรุงคลังวัตถุดิบในโรงงานผลิตชิ้นส่วนจักรกล (RAW MATERIALS WAREHOUSE IMPROVEMENT IN A MECHANICAL COMPONENT MANUFACTURING PLANT) อาจารย์ที่ปรึกษา: ผู้ช่วยศาสตราจารย์ ดร.มานพ เรียวเดช จำนวนหน้า 148 หน้า.

การศึกษานี้เป็นการพัฒนาคลังสินค้าของผู้ผลิตชิ้นส่วนเครื่องจักรกลแห่งหนึ่งในประเทศไทยกิจการนี้มีปัญหาการจัดการคลังวัตถุดิบ ทำให้พื้นที่ในคลังไม่เป็นระเบียบ คับแคบ ไม่สามารถใช้วัสดุโดยสะดวก วัสดุสูญหาย และมีปัญหาในด้านความปลอดภัย จากการศึกษาพบว่าปัญหาเหล่านี้มีสาเหตุมาจากการขาดอุปกรณ์จัดเก็บที่เหมาะสม การวางผังคลังจัดเก็บวัสดุที่ไม่เหมาะสม การขาดความชัดเจนในหน้าที่และมีระบบปฏิบัติการคลังสินค้าที่ไม่เหมาะสม

จากสาเหตุดังกล่าวทำให้กำหนดแนวทางการแก้ปัญหา 6 แนวทาง คือ (1) การออกแบบเครื่องมือจัดเก็บที่เหมาะสม (2) การจัดผังภายในคลังให้มีความเหมาะสม (3) การวางกระบวนการทำงานภายในคลังแบบใหม่ (4) การพัฒนาระบบการขนย้ายวัสดุ (5) การจัดระบบความปลอดภัยของบุคคลและทรัพย์สิน และ (6) การบันทึกข้อมูลของคลังที่เหมาะสม

การปรับปรุงคลังวัสดุควบคู่กับการใช้เทคนิค 5ส ทำให้คลังมีความเป็นระเบียบเรียบร้อยอย่างชัดเจน สามารถประหยัดพื้นที่คลังได้ 45 เปอร์เซ็นต์ การจัดเก็บการเบิกจ่ายและการจัดส่งวัสดุทำได้รวดเร็วขึ้น 60 เปอร์เซ็นต์ ซึ่งทำให้วัสดุที่ใช้ในการผลิตเร็วขึ้น การศึกษาหลังจากการปรับปรุงหนึ่งเดือน ไม่มีการบาดเจ็บหรืออุบัติเหตุเกิดขึ้นและได้กำจัดปัญหาที่อาจทำให้เกิดอุบัติเหตุได้ และคลังวัสดุมีความมั่นคงป้องกันการลักขโมยได้ดี

ภาควิชา...ศูนย์ระดับภูมิภาควิศวกรรมระบบการผลิต...ลายมือชื่อนิสิต.....  
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This study involves the warehouse improvement campaign for a mechanical components manufacturer based in Thailand. The focused company has been long suffering from its poorly-managed raw materials warehouse, which leads to untidy condition of storage area, inefficient space and poor materials utilization, raw materials pilferage and potential safety trouble. Through the research, the root causes are identified as lack of proper material storage equipments, inappropriate warehouse layout setup, unclear responsibility in the warehouse and poor warehouse operation.

Based on exploration of root causes, six pertinent solutions: (1) appropriate storage equipment design, (2) proper warehouse layout, (3) new operation procedure formulation, (4) material handling system development, (5) safety and security measures establishment (6) proper inventory records are proposed.

With Japanese 5S technique, improving activities are subsequently put into action. After implementation campaign, there have been several improvements. The warehouse physical condition is significantly improved. Space utilization is increased by 45%; Material storage, retrieval, and delivery are easier and faster by 60%, which also helps reduce production lead time. No injury and accident is reported during the period of one month after the implementation and potential safety trouble is eliminated. Storage area is well secured.

Department...Regional Centre for Manufacturing...

...Systems Engineering.....

Field of study...Engineering Management.....

Academic year ...2006.....

Student's signature *Hui Ye*

Advisor's signature *Manop Reodecha*

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