INCREASING EFFICIENCY OF SAMPLE SEARCHING ACTIVITY IN INJECTION MOLDING DEPARTMENT AT PT XYZ BY USING PDCA CYCLE

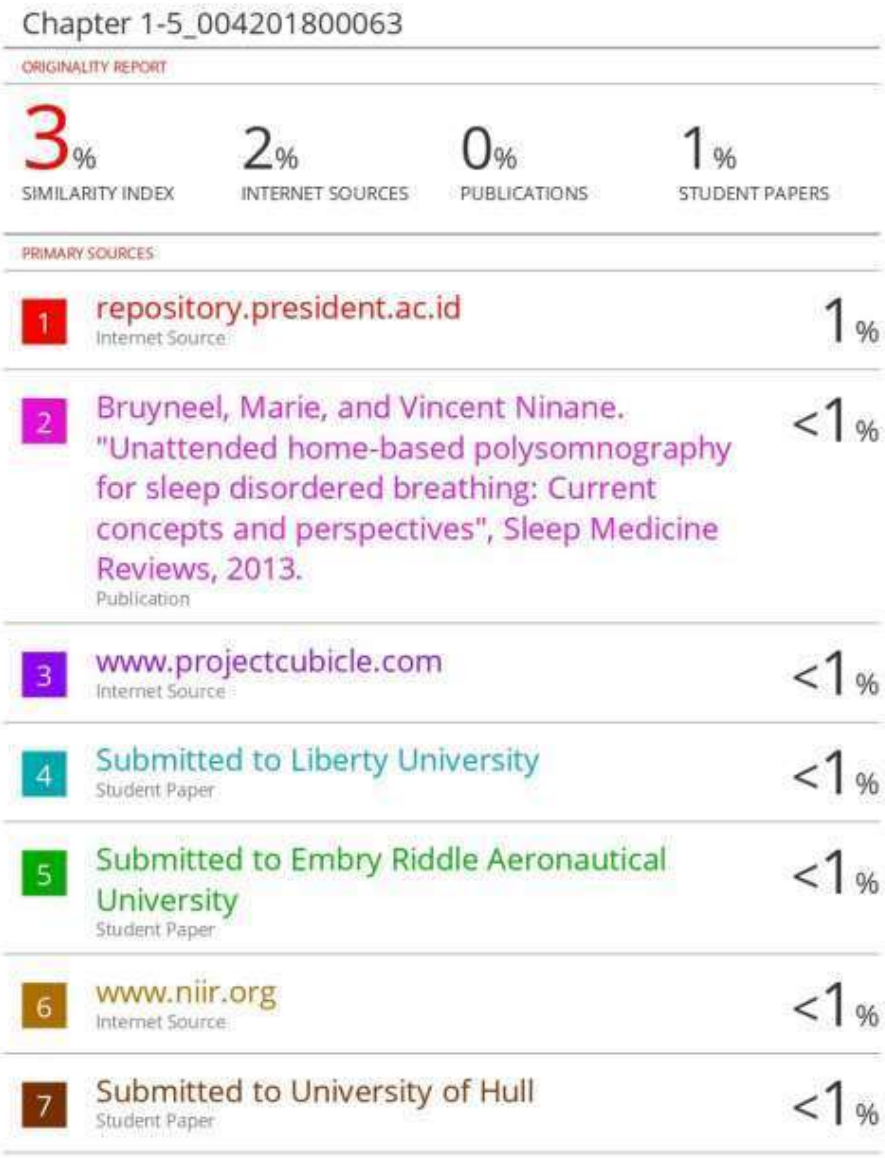
UNDERGRADUATE FINAL PROJECT

Submitted as one of the requirements to obtain Sarjana Teknik (S.T.)

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SIMILARITY CHECKING RESULT



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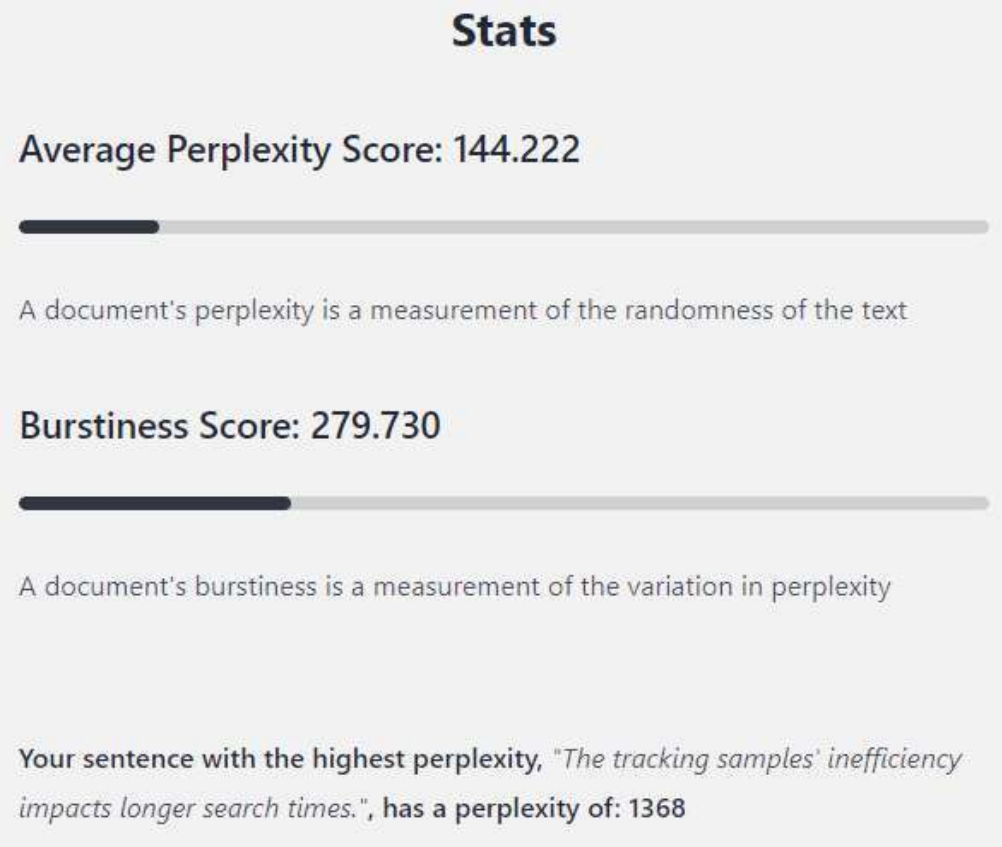
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ABSTRACT

The Injection Molding department at PT XYZ is facing issues with sample searching, which is leading to decreased productivity and increased production costs. The aim of this study, conducted using the PDCA cycle, was to identify the root causes of the issue between April and August 2022 and increase the efficiency of the sample searching activity. Objectives included reducing searching time, utilizing space more effectively, increasing sample storage capacity, and reducing potential loss costs. Action plans included adding drawers and shelves, and creating a bank database of the sample locator. As a result, searching time decreased by 91%, space utilization increased to 14%, capacity increased by 136%, and the cost of lost output was reduced by up to 91%, or Rp78,938,000.20 each month. Additionally, the cost of lost searching hours was reduced by 84%, or Rp1,798,197.00. As a result, the Injection Molding department can save up to 91% of the searching time, equivalent to Rp80,736,197.20 total cost savings each month.

Keywords: Injection Molding, sample searching, PDCA cycle, efficiency, cost reduction, productivity improvement

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LIST OF TERMINOLOGIES

Lean manufacturing	:	Lean manufacturing is a production process that focuses on reducing waste in all aspects of a company's production activities by considering all available resources to achieve economic value
Injection molding	:	Injection molding is a thermoplastic material processing method in which the material is melted through heating, injected by a plunger into a water-cooled mold, and then cooled and hardened so it can be removed from the mold
PDCA	:	PDCA stands for Plan, Do, Check, and Act. The PDCA cycle is a management method that aims to solve problems through four iterative steps
Sample	:	A sample is a prototype of a product created by the vendor and approved by the customer
Searching time	:	Searching time is the time required for a person to find something, including manual and walking work. This measure of time starts from the beginning of the task until its completion
Space utilization	:	Space utilization involves optimal load security and creating a layout that takes advantage of the entire space, using the volume of the room as effectively as possible
Capacity	:	Capacity refers to the storage capacity of an item or part within a storage device

Cost reduction	:	Cost reduction is a continuous effort specifically designed to drive spending down and save costs while maximizing business value. It involves automating the analysis of non-value added activities, eliminating waste, and improving business processes to reduce overhead or cost