IMPLEMENTATION OF PDCA METHOD TO MINIMIZE THE CUSTOMER COMPLAINTS ON MAINTENANCE AT PT AIR LIQUIDE INDONESIA

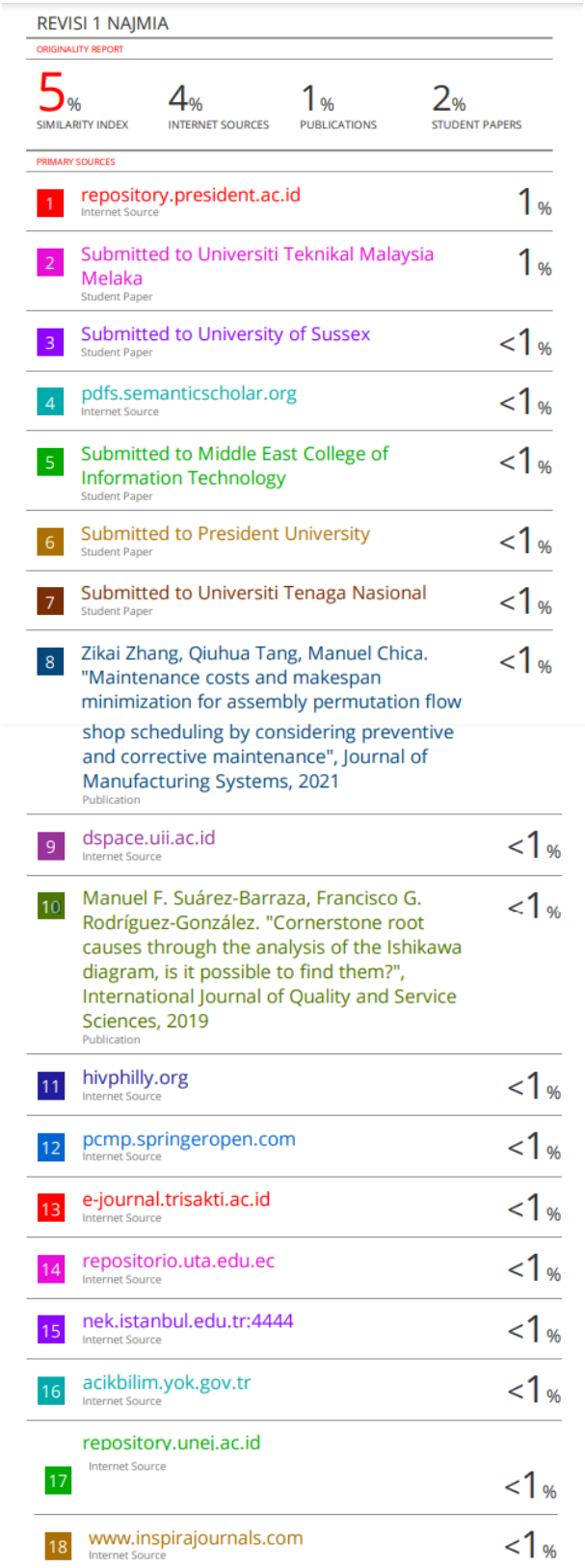
UNDERGRADUATE FINAL PROJECT

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

By
Najmia Latifarani
004201900033

FACULTY OF ENGINEERING
INDUSTRIAL ENGINEERING STUDY PROGRAM
CIKARANG
JUNE, 2023

SIMILARITY CHECKING RESULT



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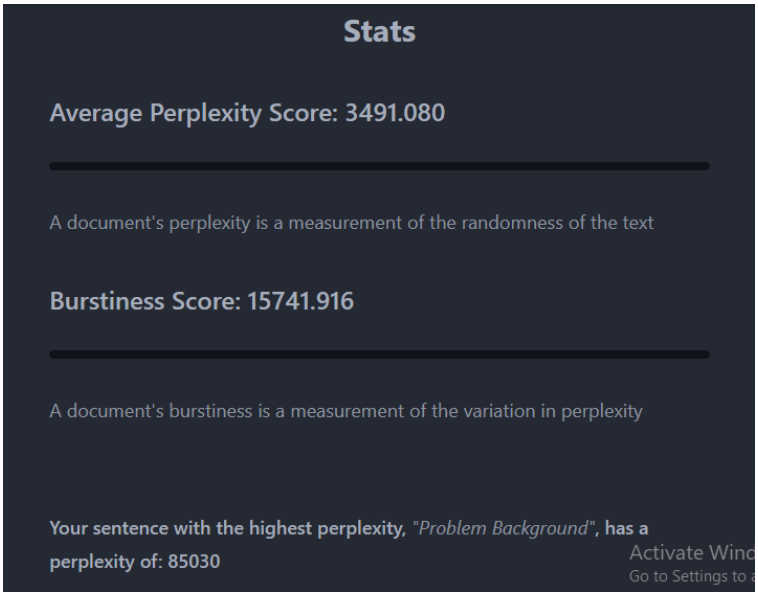
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ABSTRACT

PT. Air Liquide Indonesia provides a service namely corrective maintenance for every customer. There was an increasing corrective maintenance rate of 35% with an increase of 9 cases from January-March 2023. If these increases continue to occur, it will result in unexpected expenses and reduce customer trust. The objective of this study is to identify the root causes of corrective maintenance cases and develop effective strategies to reduce such occurrences and ultimately improve equipment reliability, operational efficiency, and customer satisfaction. This increasing occurred and three common problems were seen, namely reduction popping at PSV metering station, leak from top and bottom valve, and pressure building tank leak. These three problems become parameters for analysis of causes and consequences. This research uses the PDCA method by four stages of PDCA. The implemented improvements are spare part check with check sheet of spare parts and additional note for Work Instructions of shutoff valve. The result of the improvement is 17% reduction of customer complaints or corrective maintenance cases. With there is no repeating in three common problems, except in pressure building tank leak has one case after implementation of improvement. By this research, PT Air Liquide Indonesia saved the cost of IDR 29,720,376 in April 2023.

Keywords: PDCA method, corrective maintenance, customer satisfaction, preventive maintenance, continuous improvement, maintenance processes.

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LIST OF TERMINOLOGIES

LAR (Liquid Argon)	Gas in liquid form This form of liquefied gas, Argon (Ar), is generated in enormous numbers and volumes in air separation facilities that filter, split, and liquefy the air into the gas types Oxygen (O2), Nitrogen (N2), and Argon (Ar).
LIN (Liquid Nitrogen)	Nitrogen (N2) is a colorless, odorless, and tasteless gas that is frequently utilized as an inert gas due to its reactive tendency with many materials. Nitrogen (N2) gas is utilized in the chemical and petrochemical industries, the rubber and plastics sectors, polymer cooling and recycling processes, and electronic components.
LOX (Liquid Oxygen)	Oxygen (O2) is a chemical element that is used in the medical world, health and medicine is needed by patients who need breathing assistance. Oxygen does not burn but can help combustion (is an oxidizing agent), and is very necessary for the survival of living things.
Passing	There is a leak in the mainline
Pressure Safety Valve	A type of safety valve used to control or restrict system pressure.