THE EFFECT OF SPLICE SHUNT ON THE MIDSPAN JOINT USED IN THE ACSR 250 CONDUCTOR ON THE ELECTRICAL AND MECHANICAL PROPERTIES

UNDERGRADUATE THESIS

Submitted as one of the requirements to obtain
Sarjana Teknik

By

Cecep Badrujaman

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FACULTY OF ENGINEERING

MECHANICAL ENGINEERING STUDY PROGRAM

CIKARANG

AUGUST 2023

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THE EFFECT OF SPLICE SHUNT ON THE MIDSPAN JOINT USED IN THE ACSR 250 CONDUCTOR ON THE ELECTRICAL AND MECHANICAL PROPERTIES

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Thesis Supervisor	Head of Study Program Mechanical Engineering

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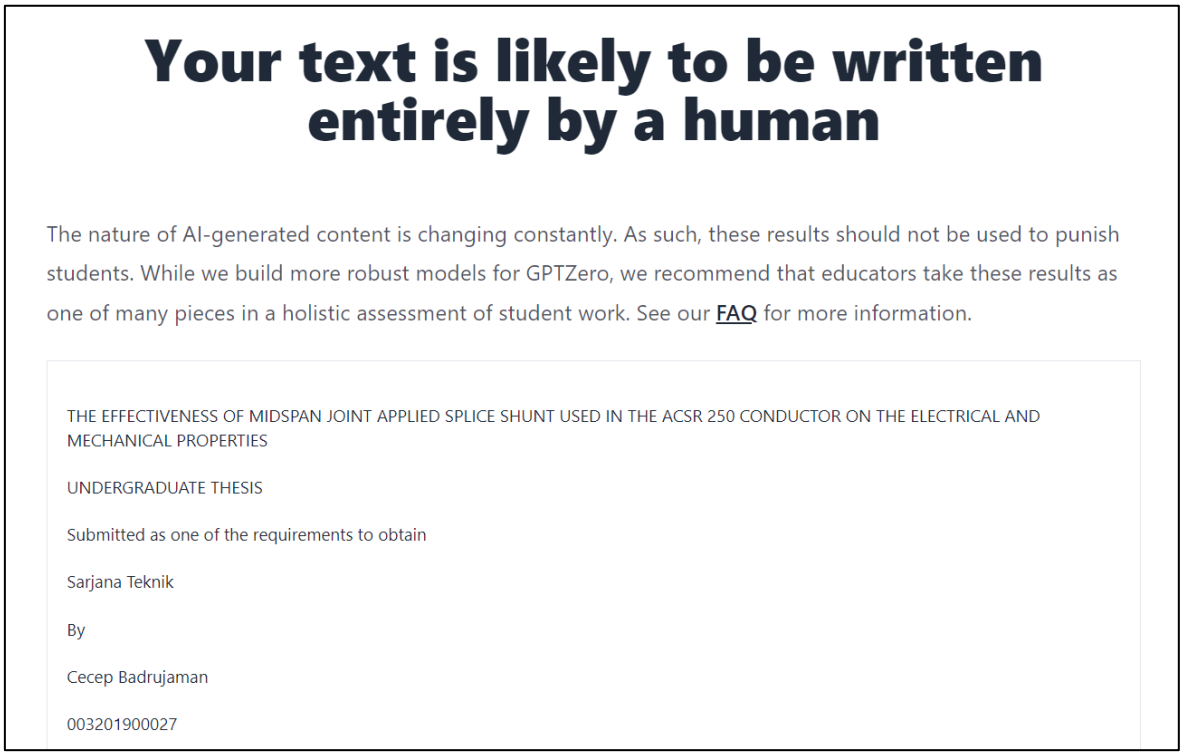

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THE EFFECTIVENESS OF MIDSPAN JOINT APPLIED SPLICE SHUNT USED IN THE ACSR 250 CONDUCTOR ON THE ELECTRICAL AND MECHANICAL PROPERTIES

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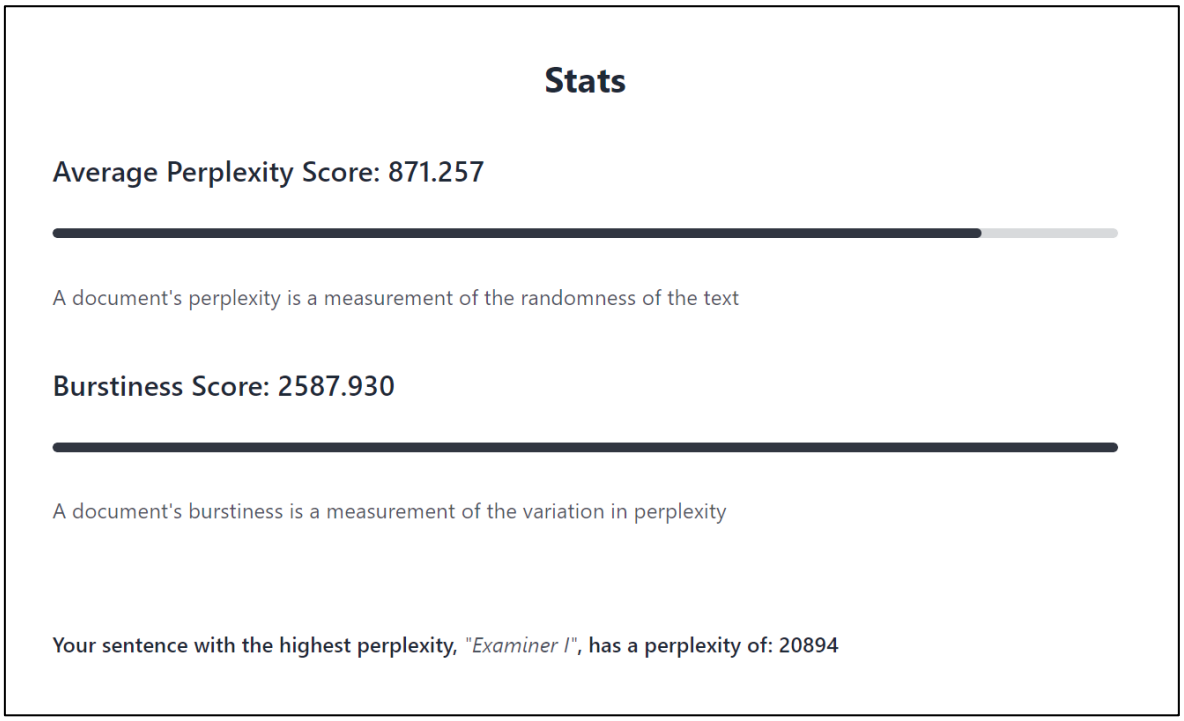

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ABSTRACT

Disturbances occur in the transmission system in the form of a decrease in quality in the midspan joint, this disturbance is a major disturbance that can result in company losses and electrical system failures. This research aims to analyze the comparison of electrical resistance, rated breaking strength, and mechanical strength of midspan joints. The research methods used include laboratory testing for electrical resistance measurement, RBS calculation, and tensile testing to determine the mechanical strength of the conductor. In this study entitled "The effect of splice shunt on the midspan joint used in the ACSR 250 conductor on the electrical and mechanical properties" it was found that the use of splice shunt on the midspan joint resulted in lower electrical resistance than the reference conductor resistance. In addition, RBS calculation shows that midspan joint with splice shunt has 39% higher mechanical strength than midspan joint without splice shunt.

Keywords: *Electrical resistance, Midspan joint, Splice shunt, ACSR 250 conductor, Rated breaking strength (RBS)*

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Alhamdulillahi Robbil 'Alamin, all praise and gratitude to Allah SWT who has given His grace and guidance so that the author can complete this thesis well. Shalawat and salam may always be poured out to our lord, the Prophet Muhammad SAW, his family, friends and followers until the end of time.

This thesis is the result of the author's hard work for several months as a requirement to obtain a Bachelor of Engineering degree in the Mechanical Engineering Study Program at the president university. In writing this thesis, the author faces various challenges and obstacles that require hard work and tenacity in dealing with them.

On this occasion, the author expresses his deepest gratitude to those who have helped, guided, instructed, and supported in the completion of this thesis:

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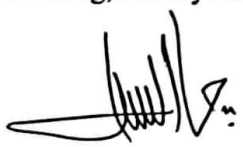
Hopefully this thesis can provide benefits and positive contributions in the development of science and technology in their fields (according to the topic of the thesis). The author realizes that there are still many shortcomings in this paper, therefore the author hopes for constructive criticism and suggestions for improvement and development in the future.

Cikarang, 26 July 2023



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