# ABSTRACT

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Name : Eko Prayoga

NIM : 2019311006

Program Of Study : Electrical Engineering

Major : Electrical Engineering

Transmission lines usually use ACSR type conductors (aluminum steel reinforced conductors) which has a permitted working temperature limit of 90°C. The main problem with using ACSR conductors is the emergence of sway and tensile stress. The results of this study show that towers 39-40 and towers 05-06 have the largest span and have the greatest effect of current and environment temperature on the sway and tensile stress, then towers 38-39 and 1A-1B have the widest span. Small and has the effect of current and temperature on the sledge and the tensile stress is smaller so it can be concluded that the current and temperature greatly affect the sledge.

**Keywords:** sling, transmission line, tensile stress, temperature change