# Article information:

Effect of energizing voltage frequency on partial discharge characteristics of defects in power cable joints - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2352484723000689>

# Article summary:

1. Partial discharge (PD) is a nonpenetrating discharge phenomenon that occurs at insulation defects and can serve as an important test indicator for joint quality control.

2. Several energizing power sources have been developed to diagnose cable insulation conditions in field tests, such as sinusoidal power–frequency voltages, very-low frequency (VLF) voltages, and damped alternating current (DAC) voltages.

3. This study investigated the effect of different energizing voltage frequencies on the PD characteristics of defects in power cable joints, such as the PDIV, PD repetition rate, PD magnitude, and PRPD pattern.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article provides a comprehensive overview of the effect of energizing voltage frequency on partial discharge characteristics of defects in power cable joints. The authors present a detailed experimental setup and discuss various research findings related to this topic from previous studies. The article is well-structured and easy to follow, with clear explanations of the concepts discussed.

The authors provide evidence from several studies to support their claims regarding the effect of energizing voltage frequency on partial discharge characteristics. However, it should be noted that most of these studies were conducted with laboratory defect models rather than real cable defects; thus, further research is needed to confirm these findings when applied to actual cables. Additionally, while the authors discuss some potential risks associated with using different energizing voltage frequencies for testing purposes, they do not provide any recommendations or guidelines for mitigating these risks.

In terms of trustworthiness and reliability, this article appears to be unbiased and presents both sides equally without any promotional content or partiality. All claims are supported by evidence from relevant studies and there are no unsupported claims or missing points of consideration. Furthermore, all possible counterarguments are explored and discussed in detail throughout the article.

# Topics for further research:

* Cable joint partial discharge testing
* Partial discharge characteristics of defects
* Energizing voltage frequency effects
* Mitigation of partial discharge risks
* Real cable defect testing
* Guidelines for partial discharge testing

# Report location:

<https://www.fullpicture.app/item/077eaafebb6bc5a605bba14827eead6a>