

การศึกษาแรงดันวาบไฟตามผิวของลูกถ้วยแห้งและลูกถ้วยแห้งก้านตรงภายใต้สภาพอากาศ  
ของประเทศไทย



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**A STUDY OF FLASHOVER VOLTAGE OF PIN-POST AND LINE-POST INSULATORS  
UNDER ATMOSPHERIC CONDITIONS IN THAILAND**

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for the Degree of Master of Engineering Program in Electrical Engineering  
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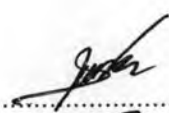
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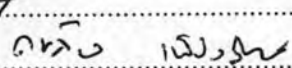


ชัยสมพร กุลบุตร: การศึกษาแรงดันวาทไฟตามผิวของลูกถ้วยแท่งและลูกถ้วยแท่งก้านตรง ภายใต้สภาพอากาศของประเทศไทย (A STUDY OF FLASHOVER VOLTAGE OF PIN-POST AND LINE-POST INSULATORS UNDER ATMOSPHERIC CONDITIONS IN THAILAND) อ.ที่ปรึกษา: ดร.คมสัน เพ็ชรรักษ์, 106 หน้า.

วิทยานิพนธ์นี้รายงานผลการศึกษการแปลงค่าแรงดันวาทไฟตามผิวของลูกถ้วยแท่งและลูกถ้วยแท่งก้านตรงตามที่แนะนำไว้ในมาตรฐาน IEC 60060-1: 1989 / IEEE 4: 1995, IEEE 4 Amendment 1 Std4a: 2001 และ ANSI C29.1: 1988 เพื่อแปลงผลการทดสอบแรงดันวาทไฟตามผิวภายใต้สภาพอากาศของห้องทดสอบไปที่สภาวะอากาศมาตรฐานตามวิธีที่กำหนดไว้ในมาตรฐาน.

ผลการศึกษาภายใต้ความชื้นที่สูงของประเทศไทยพบว่าการแปลงค่าตามที่แนะนำไว้ในมาตรฐาน ANSI C29.1: 1988 สามารถใช้ได้ดี ในขณะที่การแปลงค่าตามที่แนะนำไว้ในมาตรฐาน IEC 60060-1: 1989 ใช้ได้ดีเฉพาะกับแรงดันอิมพัลส์ชั่วขณะเท่านั้น ดังนั้นในวิทยานิพนธ์นี้จึงเสนอแพ็คเกจการแปลงค่าใหม่ เพื่อใช้กับแรงดันอิมพัลส์ชั่วขณะและแรงดันกระแสสลับภายใต้ภาวะความชื้นที่สูงของประเทศไทย.

ภาควิชา ..... วิศวกรรมไฟฟ้า ..... ลายมือชื่อนิสิต.....  .....

สาขาวิชา ..... วิศวกรรมไฟฟ้า ..... ลายมือชื่ออาจารย์ที่ปรึกษา.....  .....

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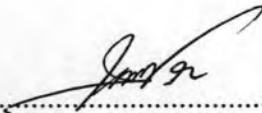
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The flashover voltage test results under laboratory atmospheric condition of external insulation are usually converted to the standard atmospheric condition by international or national standard. Thus, this thesis presents the study of the conversion of flashover voltage of Pin-post and Line-post insulator under atmospheric conditions in high voltage laboratory to standard atmospheric conditions recommended by international standard: IEC 60060-1:1989/IEEE4:1995, IEEE4 Amendment1 Std4a: 2001 and national standard: ANSI C29.1: 1988.

For the high humidity of Thailand, the studies show that the humidity correction factor recommended by ANSI C29.1: 1988 is suitable, while those recommended by IEC 60060-1: 1989 is appropriate only for negative impulse voltage. For positive impulse and AC voltage test according to IEC 60060-1: 1989, a new humidity correction factor is proposed.

Department ..... Electrical Engineering ..... Student's signature..... 

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