

## C015514 : MAJOR ELECTRICAL ENGINEERING

KEY WORD : VOLTAGE WAVEFORM/FLASHOVER/PORCELAIN INSULATORS

AUNGKOOL VONGPUKDEE : EFFECT OF VOLTAGE WAVEFORM ON  
FLASHOVER CHARACTERISTICS OF PORCELAIN INSULATORS.

THESIS ADVISOR : ASSO. PROF.SAMRUAY SANGKASAAD, EE.D. 114 pp.

ISBN 974-581-180-7

This thesis deals with an experimental study the effects of voltage waveform on flashover characteristics of porcelain insulators. The investigation was performed with the different voltage waveforms, namely DC, AC 50 Hz, switching impulse 250/2500  $\mu$ s, lightning impulse 1.2/50  $\mu$ s and steep-front impulse 0.5/50  $\mu$ s. The porcelain insulators used in this experiment were suspension insulator class 52-3, pin insulator class 56-2, pin post insulator class NGK Cat. No. DA-69001, cap-pin gap and post insulator. The results show that the flashover voltage of the lower steepness of voltage waveform is lower than that of the higher steepness voltage waveform. The flashovers occurred on any part of voltage waveform depend on the waveform and steepness of the voltage. The specific of flashover voltage depends on the configuration of insulators and their arcing distances formed with air and or insulator surface. The flashover voltage of negative polarity is higher than that of positive polarity.