

## 전기철도용 유리애자 전기적 강도 해석

정종욱, 정진수, 김영석, 김선구

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### Electrical Strength Analysis of Toughened Glass Stem Insulator for Electric Railways

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**Abstract** : This paper describes the electrical strength of a toughened glass stem insulators employed for electric railways. The broken glass stem insulators for comparison were taken at site. According to the international standards, electrical strength tests with 60[Hz] voltage and with impulse voltage were carried out to them under dry and wet condition and the results were corrected by considering the temperature and humidity factors. Based on the experimental results, the electrical strength of broken glass stem insulators was compared with those of sound ones and surface flashover characteristics were also discussed. As a result, it was confirmed that the electrical discharge is formed by bridging each end of the insulator shell. The experimental results are expected to be utilized as data for electrically identifying the failure causes of glass insulators.

**Key Words** : electrical strength, glass toughened glass stem insulator, electric railway, 60[Hz] voltage and impulse voltage