

## 电网建设

### 铝合金减震器在SF6断路器减震中的应用

尤红兵,赵凤新

中国地震灾害防御中心, 北京市 朝阳区 100029

#### 摘要:

铝合金减震器是一种适用于电气设备的新型减震器, 研究其减震效果具有重要意义。通过铝合金减震器滞回特性试验测定了减震器的力学模型参数。以瓷柱式SF6断路器为例进行了振动台试验, 并建立了相应的有限元模型。通过支架底部未安装与安装铝合金减震器时断路器地震反应的比较, 分析了减震器的减震效果。结果表明安装铝合金减震器能有效降低断路器顶层的水平向加速度峰值以及瓷套的最大应力, 减震效果明显。

#### 关键词:

### Seismic-Reduced Effect of Lead Alloy Absorber Applied in SF6 Circuit Breakers

YOU Hongbing ,ZHAO Fengxin

China Earthquake Disaster Prevention Center, Chaoyang District, Beijing 100029, China

#### Abstract:

Lead alloy absorber is a new type of absorber suitable for electrical equipments, so it is significant to research its seismic-reduced effect. Through the hysteretic test of the lead alloy absorber, the parameters of its mechanical model are measured and determined. Taking porcelain pole-mounted SF6 circuit breaker for example, the shake-table tests are performed and corresponding finite-element model is built. By means of comparing the seismic responses of circuit breaker with and without assembling lead alloy absorbers at the bottom of circuit breaker's support, the seismic-reduced effect of the absorber is analyzed. Analysis results show that horizontal directional peak acceleration at the top layer of circuit breaker as well as the maximum stress of porcelain bushing can be effectively reduced by assembling lead alloy absorber, thus the seismic-reduced effect is evident.

#### Keywords:

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通讯作者: 尤红兵

#### 作者简介:

作者Email: hbyou@126.com

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