

高电压技术

用于GIS局部放电诊断的SF6分解气体研究

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摘要:

分析了气体绝缘组合电器(gas insulated switchgear, GIS)各种故障时SF6的分解机制、分解气体的成分和稳定性,认为SOF2、SO2、SO2F2、HF、SOF4和S2F10可作为GIS局部放电的特征气体。通过检测GIS内部的SOF2+SO2、HF成分,可以判断GIS内部是否存在局部放电故障,依据HF含量可以判断GIS内部局部放电的状态,即判断局部放电是否正在持续发展。

关键词:

Research on Partial Discharge Diagnosis of GIS by Decomposed Gas of SF6

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Abstract:

The decomposition mechanism of SF₆, the constituent of the decomposed gases of SF₆ and their stability under various failures occurred in gas insulated switchgear (GIS) are analyzed. On this basis, it is thought that following decomposed gases such as SOF₂, SO₂, SO₂F₂, HF, SOF₄ and S₂F₁₀ can be used as the characteristic gasses characterizing the partial discharge (PD) of GIS; by means of detecting the constitution of SOF₂+SO₂ and HF within GIS, whether there is internal partial discharge inside GIS or not can be judged. According to the content of HF, the state of internal PD inside GIS as well as whether the internal PD is increasingly extending can be determined.

Keywords:

收稿日期 2009-03-23 修回日期 2009-12-24 网络版发布日期 2010-05-13

DOI:

基金项目:

通讯作者: 郑书生

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