



低居里点铁磁材料在输电线路防冰中应用前景分析

蒋兴良, 范松海, 孙才新, 舒立春

**摘要:**几十年来,国内外研究过许多防冰、融冰方法。其中,低居里点铁磁材料因其具有随温度变化自动实现防冰的特点,引起了广泛的关注。通过分析低居里点铁磁材料的特性,及其在输电线路防冰中的应用前景,并根据低居里点铁磁材料的成分、制造成本、加工和施工工艺以及防冰的能量要求,理论上论证了低居里点铁磁材料应用在输电线路防冰中是可行的,但必须攻克居里点温度至0℃、提高磁感应强度突变陡度等技术难题才可能实现经济和工程意义上的有效应用。

**关键词:** 低居里点; 铁磁材料; 输电线路; 防冰

Analysis on Application of the Magnetic Material of Low Curie Point to Deicing of Transmission Lines

JIANG Xing-liang, FAN Song-hai, SUN Cai-xin, SHU Li-chun

**Abstract:** In some decades many de-icing methods have been studied worldwide. One of the methods is attracted as it employs the magnetic material of low Curie point which is in response to the temperature change and thus able to de-ice automatically. By analyzing the feature of the material and its de-icing application prospect for transmission lines from the point of view of its ingredients, cost of production, technique of process and operating, energy of de-icing and so on, this paper argues that it is possible in theory for the magnetic material with low Curie point to de-ice for transmission lines, but only feasible in economy and engineering when some key technical aspects are evolved.

**Key words:** low Curie point; magnetic material; transmission lines; de-icing

点击此处下载

关闭窗口