Discussion on bus joint temperature

This study aims to monitor the temperature inside power cable joint, with strong robustness to variable thermal environments and uncertain thermal parameters of the joint.

Burnouts in a power bus bar can be prevented by quickly and accurately detecting abnormal rises in temperature and locating the hot spots. As bus bars are surrounded by strong electric fields, ...

Our system also provides an intuitive visualization of the measured temperatures of the internal switchgear/panel temperature distribution, enabling an instant correlation between hotspots ...

The calculated hotspot temperature agrees well with the measured result with a maximum error of only 3.8 K, indicating the high model precision and strong robustness to the solar radiation impact. Some ...

The temperature of electrical connections in power distribution systems is an important indicator of their condition. As connections degrade and fail, their resistance increases and their temperature can rise, ...

Derivations/formulae/Calculations for busbar joint temperature subject to different applied currents. Busbar joint consists of two rectangular busbars are...

This executive summary introduces a rigorous approach to thermal modeling of temperature rise in high-current copper busbars (I2R, skin & proximity effects), targeted at engineers designing busbars, ...

Taking the uncertainty of contact resistance into account, this paper presents an indirect approach to monitor the conductor temperature for the fully insulated busbar prefabricated joint using ...

On both the outbound (driving) and inbound (charging) conditions, bus bar systems must be designed and built to deal with a large amount of current, and the heat it generates.

Ultimately the joint can fail totally as a result of overheating. The immense damage caused can be prevented only by periodic overhaul of the busbar joints, which is both costly and time-consuming.

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