

Micro-wind vibration tubular busbar



Overview

Supporting type tubular busbars often encounter wind-induced vibration problems during long-term service in the field. Numerical simulation methods are used to analyze the wind vibration characteristics of the supported tubular busbar and the influence of damping on. The article presents an analysis of the vibrations of tubular rigid busbar located at a power station. The analysed case concerns a real-life situation involving wind acting on a circular cross-section of the busbar—considered aerodynamically stable—and on an asymmetrically iced cross-section. There are instances, however, when bus damping with conductor cable is not a cost-effective solution. But this cheap method is not satisfactory as the cable subjected to the vibrations may come out of the tube if the end caps are not properly tightened or welded then could be loose, crea 00 CET FCA 2017-01-11 00:00:00 CET SDAMPER DOC.



Article Content

Vibration Analysis and Experimental Study of GIS

To explore the vibration response of the GIS busbar enclosure in a strong electric field, the electric force on the busbar enclosure was solved by the voltage in the

Induced Vibration in Substations and Cable Damping

This vibration control through cable damping is in addition to other design criteria, such as setting optimum span lengths and sizing the tubular bus diameter based

W I St Ses Mitigating Wind-Induce

Figure 3. Examples of vibration dampers, (a) weighted ball for first mode in poles, (b) chain with optional noise-reducing wrap for first and second mode in poles, (c) externally mounted weight for second

Numerical Analysis of Wind Induced Vibration of Supporting Type

Supporting type tubular busbars often encounter wind-induced vibration problems during long-term service in the field. Numerical simulation methods are used to analyze the wind vibration

Mitigating Vibration, Shock and Expansion in Busbars

In a similar sense, from a vibration, shock, and expansion perspective, “nothing is perfectly still.” No matter how small, there will always be

(PDF) Experimental Study of the Effect of Aeolian

This paper presents an experimental study to analyze the effect of wind-induced vibrations on the contact resistance of the substation connector for

Basic Design and Analysis of Air-Insulated Substations

Fitting of busbar end caps is good practice to reduce corona at the ends of the tubular busbars. More information about corona calculation methods can be found in IEEE 605 (IEEE 2008).

Micro-electricity generation from wind-induced vibration with ...

Flow-induced vibration is a phenomenon resulting from the interaction between fluids and solids. This interaction can serve as a resource for VBPG, using intelligent materials including

Vibration Analysis and Experimental Study of GIS Busbar Enclosure

To explore the vibration response of the GIS busbar enclosure in a strong electric field, the electric force on the busbar enclosure was solved by the voltage in the circuit and the principle of virtual work. The

HV Special Applications Busbar Vibration Damper

In certain frequency conditions, busbars that are exposed to the wind can reach their natural resonance frequency (low frequency) that creates severe vibrations that can damage the installation.

Experimental research of dynamic vibration damping for rigid busbar ...

To determine the optimal parameters of dynamic vibration dampers, their calculation was performed, taking into account the joint action of the rigid busbar and the damper. Experimental research of the

Switchgear Accessories

Power plant substations are exposed to a range of climatic conditions such as wind and weather. Wind, however, is among the biggest challenges. Even light winds

Vibration Analysis of Substation Rigid-Bus Structure

The article presents an analysis of the vibrations of tubular rigid bus-bar located at a power station. The analysed case concerns a real-life situation involving wind acting on a circular cross-section of the

Wind Farm Bus System

A wind farm bus system is a core power transmission component that efficiently transfers electrical power from wind turbines to the grid system. These

(PDF) Experimental Study of the Effect of Aeolian Vibrations on the ...

This paper presents an experimental study to analyze the effect of wind-induced vibrations on the contact resistance of the substation connector for tubular aluminum bus bars.

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