Detection method of compensation capacitor

The method of fault detection of compensation capacitor in jointless track circuit based on phase sp... October 2012 · Tiedao Xuebao/Journal of the China Railway Society Shangpeng Sun

An arrayed detection coil and comb capacitor combination mode is proposed to realize the function of the simultaneous detection of metal and living organism foreign ...

The phenomena of harmonic compensation by APFs proposed from the end of the 1960s to the 1970s [1- ... All harmonic detection method s mentioned above have their ... (0.1 dB) switched-capacitor ...

This paper uses transport-line theory to construct equivalent model of jointless track circuit under shunted state and analyses the principle of track induced circuit in the disconnection fault of compensation capacitor based on the model. At the same time, according to the work principle ...

Aiming at possible multiple compensation capacitor faults existing in a track circuit, based on the mathematical model of locomotive signal induction voltage amplitude envelope, a rapid diagnosis ...

The proposed fault detection method based on the Mathematical Morphology is introduced in detail. ... If a TCSC is used instead of a series capacitor, fault detection will be even more challenging. In TCSC-based compensated lines, due to nonlinear changes in the compensation level, when faults and power swings occur, the TCSC performance area ...

The DTW method is used for the first time in this situation to recover the function relationship between receiver"s peak voltage and shunt position and it can be used for online diagnosis of compensating capacitor, which has not yet been realized by existing methods. Aiming at the problem of online fault diagnosis for compensating capacitors of jointless track ...

swing, and existing methods for this detection might not be applicable. During power swing if the fault occurs at the end point of a line, at the swing center (power angle close to 180°) or with ...

The compensation capacitors fault detection method of jointless track circuit based on DBWT and WR ... finally by detecting the changes of instantaneous frequency to diagnose the disconnection fault of compensation capacitor. This method is verified that it can detect the location of fault capacitor when there is only one capacitor is fault, in ...

This method is verified that it can detect the location of fault capacitor when there is only one capacitor is fault, and largely overcomes the disadvantages existed in recent detection methods: high cost, bad detection

timeliness and influence on railway transportation. This paper uses transport-line theory to construct equivalent model of jointless track circuit ...

This paper uses transport-line theory to construct equivalent model of jointless track circuit under shunted state and analyses the principle of track induced circuit in the disconnection fault of compensation capacitor based on the model. At the same time, according to the work principle of cab signal and the consistent changes relationship between cab signal induced voltage and ...

In order to meet the needs of railway electrical departments for & #8220;state repair& #8221; of track circuit compensation capacitors and timely and effective monitoring of compensation capacitor status, this paper proposes a new method that combines the feature...

The experimental results show that the detection effect of the capacitance fault detection method based on simulated annealing algorithm is accurate, and detection time is short, and the ...

The embodiment of the invention provides a method and a device for detecting defects of a compensation capacitor, wherein the method comprises the following steps: acquiring current state data of the target compensation capacitor; determining the current environment temperature of the area where the target compensation capacitor is located, the current commercial power ...

The fault detection of compensation capacitors has always been one of the common concerns of researchers in the field of railway signaling. Many scholars have conducted in-depth research on the detection of compensation capacitors: In reference [1], aiming at ...

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