

ABSTRACT

A condition surveillance on a rotary mechanical system is performed, including a first process of performing fast Fourier transformation of a current signal in operation from a three-phase induction motor (12), a second process of extracting sideband waves of the current spectrum peak of a power supply frequency, from an obtained current spectrum, which are located at frequency positions respectively separated from the current spectrum peak as the center to the low frequency side and the high frequency side by a feature frequency associated with an abnormality in a rotary mechanical system (11), and obtaining a current spectrum peak value or current spectrum peak values of one or both of the sideband waves, a third process of calculating a deterioration parameter of the rotary mechanical system (11) by using the current spectrum peak values of the sideband wave and the power supply frequency, and a fourth process of recording the value of the deterioration parameter and detecting an abnormality by comparing the value of the deterioration parameter with a deterioration determination criterion.