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(54) **METHOD OF ON-LINE TURBINE BLADE SLOPE AND SENSOR POSITION VERIFICATION**

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(57) **ABSTRACT**

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A method of monitoring vibrations in a blade structure of a turbine including generating signals from a sensor located adjacent to a radial outer edge of the blade structure to sense passage of targets located on the blade structure. The sensor is mounted eccentrically and the signals are obtained with the sensor located at different angular positions. In a first aspect of the invention, the signals from the sensor are used to determine a target slope angle of a target on a first turbine blade during operation of the turbine. In a second aspect of the invention, the signals from the sensor are used to position the sensor in response to a sensed variation in the axial position of the target on the first turbine blade.

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