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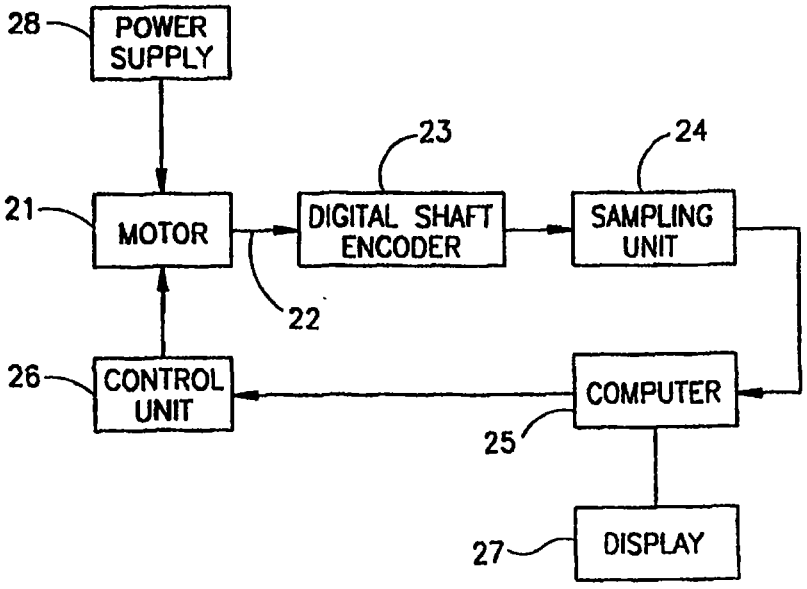


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(54) Title: METHOD AND SYSTEM FOR PERFORMANCE TESTING OF ROTATING MACHINES




(57) Abstract

A method for measuring an angular rotation of a rotating shaft, comprising the steps of attaching to the shaft a digital rotary encoder which generates successive HIGH and LOW logic levels during respective successive time intervals. The shaft is rotated and the respective time periods of each successive logic level generated by the digital rotary encoder are accumulated so as to allow derivation of the angular rotation or a function thereof of the shaft. Such a method produces accurate results regardless of tolerance errors in the duty cycle of the encoder. This may be used for testing a performance of a rotating machine or of a component thereof in order to derive a speed–time characteristic of the rotating machine or a function thereof. Owing to the inherent high measurement resolution of the invention, dynamic performance may be determined accurately as well as steady–state performance without the need to slow down the machines speed of rotation by use of a flywheel.