

TITLE: Method and Apparatus for Analyzing Rotor Balance

ABSTRACT

A method and apparatus for analyzing rotor balance having improved noise tolerance and shorter cycle time. The method consists of rotating a test subject that has an unbalanced mass around an axis of rotation. Sensors generate signals indicative the position of the test subject and of the radial force generated by the rotating test subject. A digital signal processor, such as a computer, uses the signals to calculate information indicative of the imbalanced mass.

One embodiment of the invention samples the test subject during several rotations. The computer calculates the average period of the test signal. The computer also calculates the average force observed when the test subject is in particular orientations. These values can be used to calculate where to place a weight that will reduce dynamic unbalance.

Fig. 1A & 1B