

SHAFT CONE METROLOGY SYSTEM AND METHOD

ABSTRACT

Aspects include metrology methods and systems for determining characteristics of conical shaft portions, such as angle of taper. In an example, a metrology system includes a fixture for supporting a workpiece. The fixture provides for translation in a longitudinal dimension, and rotation about an axis of symmetry. The system may include a sensor mounted for scanning lines including sections of the workpiece as well as control logic for coordinating translation of the workpiece to provide for an approximately constant ratio of longitudinal translation and lines scanned during scanning operations. The system may include image logic for assembling an image from image data generated during each scanning operation; edge detection logic for detecting at least one edge shape in each assembled image; and slope calculation logic for calculating a slope of each of the at least one detected edge shape.

FIGURE 8