

METHOD AND APPARATUS FOR LOCALIZED DIGITAL RADIOGRAPHIC INSPECTION

ABSTRACT OF THE DISCLOSURE

A system (10) and method for radiographic inspection of airfoil structure (16) on aircraft (12) includes a radiation source (30) located on one side of the airfoil structure (16) and an X-Y scanning device (44) located on an opposing side of the airfoil structure (16). The X-Y scanning device (44) is positioned to receive radiation from the radiation source (30). A radiation detector (42) is mounted on the X-Y scanning device (44) so as to be moveable relative to the airfoil structure (16) along two mutually orthogonal axes. In operation, the radiation detector (42) is moved in a predetermined raster pattern while the radiation source (30) is emitting radiation. This allows a large area to be inspected with single positioning of the X-Y scanning device (44), thereby improving throughput. The radiation detector (42) converts impinging radiation into electrical signals, and a computer system (10) processes the signals to generate radiographic images of the airfoil structure (16).

Figure 4