METHODS FOR DETERMINING THE DEPTH OF DEFECTS

ABSTRACT

A method facilitates inspection of a component surface (28). The method comprises positioning a surface of the component (10) to be inspected in an optical path (24) of at least one infrared radiation detector (26), heating the component surface using electromagnetic radiation to cause an increase in radiance from a defect (70) present at the component surface, and detecting temperature variations within the component surface using the at least one infrared radiation detector, such that the surface irradiance is measured at predetermined locations across the component surface. The method further comprises detecting cracks in the component by analyzing radiation transient response data received by the infrared radiation detector, and correlating the temperature variations to the radiation transient response data to determine a depth of the detected cracks.

Fig. 1