

SYSTEMS AND METHODS FOR ULTRASONIC INSPECTION OF COMPLEX GEOMETRIES

ABSTRACT

A sensor probe (110) may include a plurality of sensor elements (310), wherein a sensor element (310), of the plurality of sensor elements (310) includes an ultrasound transducer (320). The sensor probe (110) includes a body formed at least in part from a flexible material (370). The flexible material (370) provides acoustic coupling between the ultrasound transducer (320) and a component surface (125), and wherein the flexible material (370) establishes a conformal surface between the plurality of sensor elements (310) and the component surface (125). The sensor probe (110) may further include a locomotion actuator (420) operable to move the sensor probe (110) along the component surface (125); a controller (250) configured to control operation of the plurality of sensor elements (310) and the locomotion actuator (420).

[Figure 1]