

MULTIPLE CHANNEL LASER ULTRASONIC SYSTEM

ABSTRACT

The present disclosure provides for a multiple channel laser ultrasonic system using a single detection laser and a single generation laser for inspecting internal structures. An example system includes a laser generator configured to emit generation laser light, a laser detector configured to emit detection laser light, and a scanning apparatus. The scanning apparatus is configured to receive the generation laser light and the detection laser light, direct the generation laser light and the detection laser light onto a surface of a structure via a plurality of laser ultrasonic channels, and collect reflections of the detection laser light from the surface of the structure via the plurality of laser ultrasonic channels. The system also includes a controller configured to characterize an internal feature of the structure based on the reflections.

Fig. 2