

AUTOMATED ASSESSMENT OF AIRCRAFT STRUCTURE DAMAGE

ABSTRACT

5 A system may include a camera module that may include a first infrared
camera, a second infrared camera, and a visible light camera. The system may
further include an autonomous vehicle that may include a vertically extendable arm
attached to the camera module. The system may also include a processor
configured to initiate movement of the autonomous vehicle around an aircraft
according to a predetermined path, initiate a scan of an exterior surface of the
10 aircraft using the first infrared camera, the second infrared camera, the visible light
camera, or a combination thereof, determine whether a portion of the exterior
surface of the aircraft is damaged based on the scan, and in response to the portion
of the exterior surface of the aircraft being damaged, use the first infrared camera,
the second infrared camera, and the visible light camera to generate a three-
15 dimensional model of the portion of the exterior surface of the aircraft.

Fig. 5