

Title (en)

SYSTEM AND METHOD FOR DRILLING HOLES AND INSTALLING FASTENERS IN VEHICLE STRUCTURES

Title (de)

SYSTEM UND VERFAHREN ZUM BOHREN VON LÖCHERN UND INSTALLIEREN VON BEFESTIGUNGSELEMENTEN BEI FAHRZEUGSTRUKTUREN

Title (fr)

SYSTÈME ET PROCÉDÉ DE PERÇAGE DE TROUS ET D'INSTALLATION D'ÉLÉMENTS DE FIXATION DANS DES STRUCTURES DE VÉHICULE

Publication

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Application

EP 20901743 A 20201214

Priority

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- US 201916718511 A 20191218
- US 2020064769 W 20201214

Abstract (en)

[origin: WO2021126733A1] A system and method for drilling a hole in a vehicle structure and installing a fastener in the hole. A drill plate having openings and associated machine-readable elements is positioned on the structure. A drill gun is positioned in a particular opening and reads hole information from the associated element, and a computer determines whether the drill gun is properly set-up to drill the hole. A fastener insertion gun is positioned in the particular opening and reads fastener information from the element, and the computer determines whether the hole has been drilled and, if so, whether the fastener insertion gun is properly set-up to insert the fastener. A fastener delivery subsystem stores, tracks, and delivers fasteners to the fastener insertion gun. A system computer monitors the drilling of every hole, the insertion of every fastener, and the overall operation of the fastener delivery subsystem.

IPC 8 full level

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Citation (search report)

- [I] US 2014025196 A1 20140123 - HAIN JOCHEN [DE], et al
- [I] CA 2952689 A1 20170822 - BOEING CO [US]
- [A] US 2008267728 A1 20081030 - ERIKSSON INGVAR [SE], et al
- [Y] CN 102036787 A 20110427 - MAX CO LTD
- [Y] EP 2121225 B1 20110907 - AIRBUS OPERATIONS SAS [FR]
- See also references of WO 2021126733A1

Designated contracting state (EPC)

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