

Title (en)

Connection device for a drilling and impact mechanism of a tap hole drilling machine and tap hole drilling machine with connection device

Title (de)

Anschlussvorrichtung für ein Bohr- und Schlagwerk einer Stichlochbohrmaschine sowie Stichlochbohrmaschine mit Anschlussvorrichtung

Title (fr)

Dispositif de raccordement pour un outil de forage et de percussion d'une foreuse à trou de coulée et foreuse à trou de coulée dotée d'un dispositif de raccordement

Publication

EP 2514843 A1 20121024 (DE)

Application

EP 11163285 A 20110420

Priority

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Abstract (en)

The connection device comprises a connecting body, a receiving part (59) for a bore bar (17), a first receiving bore for receiving a terminal end of the bore bar, a second receiving bore (28), a receiving part for a boring mill shaft (25), a display device for indicating a stop position, a reference surface formed on the connecting body, and a connecting channel (72) with an indicator piston, whose length is slightly greater than the length of the connecting channel in such a way that a display end of the indicator piston protrudes from the reference surface. The connection device comprises a connecting body, a receiving part (59) for a bore bar (17), a first receiving bore for receiving a terminal end of the bore bar, a second receiving bore (28), a receiving part for a boring mill shaft (25), a display device for indicating a stop position, a reference surface formed on the connecting body, and a connecting channel (72) with an indicator piston, whose length is slightly greater than the length of the connecting channel in such a way that a display end of the indicator piston protrudes from the reference surface upon contact with an end face of a threaded end of the boring mill shaft against a stop surface. The second receiving bore acts as a threaded bore and serves for non-positive connection with the threaded end of the boring mill shaft. The receiving bores are disposed on a longitudinal axis of the connecting body, and a bore bottom of the second receiving bore forms an axial stop surface for bearing the end surface of the threaded end in the stop position of the threaded end. The reference surface of the connecting body is formed: by a front surface of the bore bar receiving part; and by a front surface of a reference body arranged in an end portion of the connecting channel. The reference body is formed as a screw-in unit. The connecting channel comprises a stop unit, which cooperates with a stop member of the indicator piston, and is inclined to the longitudinal axis of the connecting body at an angle so that the connecting channel extends outwardly from the stop surface towards the reference surface of the connector body. The stop unit is formed by: a bore shoulder formed in the connecting channel; and the end face of the reference body. The indicator piston is formed as an indicator pin. The connecting body comprises a second stop unit, where the distance is chosen between the stop devices so that the displacement of the stop member of the indicator pin is equal to a display length or greater than the display length of the display end. The second stop unit is formed: as the stop pin projecting in the connecting channel, where the stop pin is arranged in the receiving bore connecting the connecting channel having a peripheral surface of the connecting body; and by the bore shoulder formed by the connecting channel. An independent claim is included for a tap hole drilling machine.

Abstract (de)

Anschlussvorrichtung (55) zur Verbindung einer Bohrstange (17) mit einer Bohrerwerkswelle (25) eines Bohr- und Schlagwerks einer Stichlochbohrmaschine, wobei die Anschlussvorrichtung einen Verbindungskörper (56) mit einem Bohrstangenauflnahmeteil (59) mit einer ersten Aufnahmebohrung zur Aufnahme eines Anschlussendes der Bohrstange und mit einem Bohrerwerkswellenaufnahmeteil (32) mit einer zweiten Aufnahmebohrung (28) aufweist, die als Gewindebohrung ausgeführt ist und zur kraftschlüssigen Verbindung mit einem Gewindeende der Bohrerwerkswelle dient, wobei die Aufnahmebohrungen auf einer Längsachse des Verbindungskörpers angeordnet sind und ein Bohrungsgrund der zweiten Aufnahmebohrung in einer Anschlagstellung des Gewindeendes eine axiale Anschlagfläche (37) zur Anlage gegen eine Stirnfläche (36) des Gewindeendes bildet, wobei zur Ausbildung einer die Anschlagstellung anzeigenden Anzeigevorrichtung (57) zwischen der Anschlagfläche und einer am Verbindungskörper ausgebildeten Referenzfläche der Verbindungskörper einen Verbindungskanal (72) mit einem im Verbindungskanal geführten Anzeigekolben aufweist, dessen Länge zumindest geringfügig größer ist als die Länge des Verbindungskanals, derart, dass bei Anlage der Stirnfläche des Gewindeendes gegen die Anschlagfläche ein Anzeigende (69) des Anzeigekolbens aus der Referenzfläche hervorragt.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [A] DE 8907232 U1 19890921
- [A] DE 102009009537 A1 20100826 - TMT TAPPING MEASURING TECHNOLO [DE]
- [A] US 5661888 A 19970902 - HANSLIK KENNETH J [US]
- [A] WO 02079603 A1 20021010 - TRACTO TECHNIK [DE], et al

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