

Title (en)  
Scraper device and grater device

Title (de)  
Schabervorrichtung und Rakelvorrichtung

Title (fr)  
Dispositif de racloir et dispositif de raclage

Publication  
**EP 2113608 A3 20091209 (DE)**

Application  
**EP 09154835 A 20090311**

Priority  
DE 102008001265 A 20080418

Abstract (en)

[origin: EP2113608A2] The scraping device (1) comprises a scraper blade (2) for cooperating with a movable surface (6), a holding device for the scraper blade, a device (5) for generating a contact pressure for pressing the scraper blade on the movable surface, and a device (8) for indirectly detecting one of the pressing force and/or contact pressure of indirectly characterizing parameters over a partial area of the extension of the scraper blade. The detection device has piezoelectric sensors arranged over the length of the scraper blade, which considerably corresponds to the extension of the scraper blade. The scraping device (1) comprises a scraper blade (2) for cooperating with a movable surface (6), a holding device for the scraper blade, a device (5) for generating a contact pressure for pressing the scraper blade on the movable surface, and a device (8) for indirectly detecting one of the pressing force and/or contact pressure of indirectly characterizing parameters over a partial area of the extension of the scraper blade. The detection device comprises piezoelectric sensors arranged over the length of the scraper blade, which considerably corresponds to the extension of the scraper blade in a width direction of the movable surface. The scraper blade comprises two scraper blade sections, which are arranged adjacent to each other over the length of the scraper blade. One of the scraper blade sections has piezoelectric sensor under the formation of a measuring frame. The scraper blade sections have different lengths. The piezoelectric sensors are arranged at one of the scraper blade sections. The piezoelectric sensors arranged over the length of the scraper blade and/or the scraper blade sections are respectively arranged with equal distance (c) from a blade end of the scraper blade acting on the movable surface and are respectively arranged to each other with variable distance (a 1, a 2) viewed in the longitudinal direction of the scraper blade. The piezoelectric sensors are arranged at a blade upper side that is aligned away from a contact area at the movable surface and/or a blade lower side that is turned to the contact area at the movable surface, are arranged within the extension of the contact area at the movable surface, are arranged on the blade upper surface, are arranged in recesses arranged on the blade upper surface, have a circular shape, whose extension is equally dimensioned in two vertical directions to each other, have an elongate shape whose extension is differently dimensioned in two vertical directions to each other, are relatively arranged to each other parallel in relation to its larger extension, and are arranged at an angle ( $\alpha$ ) of 90[deg] to the longitudinal direction of the scraper blade. An individual support area bearing the piezoelectric sensor at the scraper blade and/or scraper blade sections is uncoupled by the remaining support areas and/or free areas from the sensor. The scraper blade and/or scraper blade sections have open-edged recesses or cuts on both sides of the sensors. The sensors are individually or groupwisely mutually coupled with a data acquisition device and/or an evaluation device. The coupling is carried out as electrical coupling, is wireless, has line connections and are designed as infrared connection or radio communication. The data acquisition device and/or evaluation device are formed by a controller and/or a regulator and a computer. An independent claim is included for a doctor blade device.

IPC 8 full level  
**D21G 3/00** (2006.01); **D21H 23/34** (2006.01)

CPC (source: EP)  
**D21G 3/005** (2013.01); **D21H 25/10** (2013.01)

Citation (search report)

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