

Title (en)
EQUIPMENT FOR HEMP FIBER PROCESSING

Title (de)
AUSRÜSTUNG FÜR DIE HANFFASERVERARBEITUNG

Title (fr)
ÉQUIPEMENT DE TRAITEMENT DE FIBRES DE CHANVRE

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EP 4123062 A1 20230125 (EN)

Application
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Abstract (en)
The invention relates to a mobile equipment with electromechanical drive intended for processing hemp stalks, from experimental plots, for fibre. The equipment for hemp fibre processing, according to the invention, consists of the support (1) constructed of assembled parts and having four wheels for movement (2), a handle (3) and two adjustable legs (4) for its positioning during work. On the support (1) is mounted a stalk processing module (5) comprising a housing (6) with two rollers (7) and (8) for driving hemp stalks and two profiled blade rollers (9) and (10) that will defoliate the stalks introduced into the inlet only with the upper part of the stalk. Simultaneous drive of this set of rollers is done by an electric motor (11) and a V-belt drive (12), the electric motor is controlled by means of a frequency converter mounted in the electrical control panel (13). The two rollers (7) and (8), having on the outer surface a jacket (14), will drive the hemp stalks and are positioned by means of fixed bearings (15) and two adjustable bearings (16) which are actuated by two adjustable springs (17) and two threaded rods (18). The rollers (7) and (8) are driven together by two cylindrical pulley wheels (19) and (20) and the rollers (9) and (10) are driven together by two cylindrical pulley wheels (21) and (22) and between the two pairs of rollers the Gall chain drive (23) is used. The blade rollers (9) and (10) which are used to remove the leaves from the stalks are constructed of a single body (24) provided with special grooves (25) in which the profiled blades (26) are positioned by means of wedges (27) and screws (28). On the same support and in the immediate vicinity of the defoliation roller housing (6) is mounted a housing (29) with six rollers (30) which hull the hemp stalks to obtain fibre. These rollers are simultaneously driven by a coaxial gear motor (31) and a Gall chain drive (32). In this processing block, the woody part of the stalks is fragmented and the hemp fibre is partially separated.

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• EP 2018447 A1 20090128 - FIBRE LAB PTY LTD [AU]
• US 2018103591 A1 20180419 - JIN SHAN [CA]
• WO 2016179681 A1 20161117 - JIN SHAN [CA]

Citation (search report)
• [A] CN 106811804 A 20170609 - TIAN RONGXIA
• [A] US 2399809 A 19460507 - KARL KAISER
• [A] CN 108517568 A 20180911 - HARBIN RES INSTITUTE OF FORESTRY MACHINERY OF STATE FORESTRY ADMINISTRATION
• [A] CN 111172599 A 20200519 - XIANG DAOYING
• [A] US 2480602 A 19490830 - PATTERSON DAVID E

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