

Title (en)

Apparatus for taking up forces for a drilling mast

Title (de)

Vorrichtung zur Aufnahme von Kräften für eine Bohrturm

Title (fr)

Dispositif de reprise d'efforts pour le mât d'un outil de forage

Publication

EP 1085168 A1 20010321 (FR)

Application

EP 00402453 A 20000906

Priority

FR 9911573 A 19990916

Abstract (en)

At least two identical bearing plates each have a load-bearing surface pressing on the ground and a linkage. The bottom of the mast and the part connected to the bearings are linked by kinematic means. In the active position the bearings press on the ground symmetrically about a plane containing the axis of the vertical mast and the vertical axis of the tool Load-bearing device for the mast of a drilling tool which can be displaced along the mast, which is associated with a platform. The kinematic means move from a resting position to the active position where the bearings press on the ground. The kinematic means comprise two linkage assemblies, one end of each is connected to the mast near its bottom end and the other end of each is connected to the connection to a bearing plate. The means of controlling the kinematic means comprise two separate control assemblies, each acting with one linkage assembly. Each linkage assembly has an arm with one end articulated about a first axis of rotation parallel to the longitudinal plane of the mast and drill and orthogonal to the longitudinal axis of the bearing plate, mounted at the bottom end of the mast. The other end is articulated about a second axis of rotation parallel to the first and mounted on the connection to the bearing plate. Each control assembly comprises a jack with one end forming the shaft and the other the body of the jack. One end of the jack is articulated on one of the arms about a third axis of rotation parallel to the first two in an intermediate zone of the arm; the other end of the jack is articulated about a fourth axis of rotation parallel to the others and mounted on the mast near the bottom end. The jacks are double operating jacks and are hydraulic. In addition, there is a vertical guide fixed to the platform to guide the vertical translation of the bottom end of the mast relative to the linkage to the bottom end of the mast to ensure they slide downwards when the load applied by the mast is greater than a set value. The linkages are made of at least one jack and a pressure limiter to limit the pressure of the fluid fed to the jack.

Abstract (fr)

L'invention concerne un dispositif de reprise d'efforts pour le mât (12) d'un outil de forage apte à être déplacé le long dudit mât. Le dispositif comprend : au moins deux patins (30) sensiblement identiques, chaque patin comportant une surface (30a) d'appui sur le sol et une portion de liaison (30b) ; des moyens cinématiques de liaison (34) entre une région (12a) disposée à proximité de l'extrémité inférieure dudit mât et les portions de liaison desdits patins ; et des moyens de commande de déplacement (42) des moyens cinématiques de liaison pour déplacer lesdits patins entre une position de repos et une position active dans laquelle lesdits patins sont en appui sur le sol par leur surface d'appui symétriquement par rapport au plan contenant l'axe longitudinal dudit mât en position verticale et l'axe longitudinal dudit outil de forage. <IMAGE>

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