

Title (en)

Swing gear driven by two separate cylinder-crank mechanisms.

Title (de)

Schwenkwerk mit zwei separaten Zylinder-Kurbeltrieben als Antrieb.

Title (fr)

Mécanisme pivotant entraîné par deux cylindres séparés à bielle-manivelle.

Publication

EP 0229330 A2 19870722 (DE)

Application

EP 86117269 A 19861211

Priority

DE 3600816 A 19860114

Abstract (en)

1. Slewing mechanism with two separate cylinder crank drives by way of drive, whereby both slewing cylinders (1, 2) operate in double-acting manner and possess a unilaterally extending piston rod (5, 6) so as to form a differential piston arrangement and exhibit a slewing angle of less than 360 degrees, as for use with crane and excavator systems, the dead centres (15, 16) of the cylinder crank drives being mutually offset in respect of the slewing angle and the slewing cylinders (1, 2) being so designed that they can be operated in meterable manner by means of a preferably electrohydraulic drive from a pump (21), characterised in that, - each of the rod chambers of the two slewing cylinders (1, 2) can be subjected, within the slewing ranges, in which they take in oil, to the full pressure of pump (21), in that discharge throttles (39, 41 and 40, 42) are associated with the two cylinder chambers of slewing cylinders (1, 2), and in that transducers (60, 61) are used for changing over the pump- or return pressures as the pistons of slewing cylinders (1, 2) pass through the dead centres, - in that, as the slewing mechanism slews from one end position (8) to the other end position (8') or vice versa, the head chambers of cylinders (1, 2) are, within the slewing ranges in which both of them take in oil simultaneously, subject either to a reduced pressure (55"), or in that, within said slewing ranges, only one head chamber is subject to the full pump pressure (55'), whereas in the other cylinder (1) both cylinder chambers are connected with the return line (27) when the dead centre on the head-side (46) is reached.

Abstract (de)

Es ist hierbei vorgesehen, daß zur Erzielung einer gleichmäßigen Schwenkbewegung mit versetzt angeordneten Zylinder-Kurbeltrieben der Pumpendruck über ein Ventil beim Durchgang durch einen bodenseitigen Totpunkt vom Bodenraum auf den Stangenraum der Schwenkzylinder geschaltet wird. Gleichzeitig ist vorgesehen, daß der Rücklaufdruck vom Stangenraum auf den Bodenraum schaltbar ist. Gegenbenenfalls ist vorgesehen, über ein Lastdruck-Sensierungs-Verfahren eine Verstellpumpe zu steuern, wobei der Druck von den Lastdrücken beider Schwenkzylinder beeinflussbar ist.

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