

Title (en)  
MULTI-JOINT CRANK DRIVE OF AN INTERNAL COMBUSTION ENGINE AND CORRESPONDING INTERNAL COMBUSTION ENGINE

Title (de)  
MEHRGELENKSKURBELTRIEB EINER BRENNKRAFTMASCHINE SOWIE ENTSPRECHENDE BRENNKRAFTMASCHINE

Title (fr)  
MÉCANISME BIELLE-MANIVELLE À ARTICULATIONS MULTIPLES POUR MOTEUR À COMBUSTION INTERNE AINSI QUE MOTEUR À COMBUSTION INTERNE CORRESPONDANT

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Application  
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Abstract (en)  
[origin: WO2015070979A1] The invention relates to a multi-joint crank drive (2) of an internal combustion engine (1) comprising at least one coupling element (8) mounted rotatably about a coupling element rotational axis, on a lifting pin (13) of a crankshaft (14), and at least one articulated connecting rod (16) rotatably mounted around an eccentric rotational axis (18) on a lifting pin (19) of an eccentric shaft (20), wherein the coupling element (8) is pivotably connected around a piston connecting rod rotational axis (9) to a piston connecting rod (6) of a piston (4) of the internal combustion engine (1) and is pivotably connected around an articulated connecting rod rotational axis (17) to the articulated connecting rod (16), and wherein a rotational axis (21) of the eccentric shaft (20) lies above a plane (22) which incorporates a rotational axis (15) of the crank shaft (14) and is perpendicular to at least one longitudinal centre line of a cylinder. It is thereby provided that the distance (l1) between the rotational axis of the piston (7) and the rotational axis of the piston connecting rod (9) is at least 1.41 at most 1.61; and the distance (l2) between the rotational axis of the piston connecting rod (9) and the rotational axis of the coupling element (12) is at least 0.38 and at most 0.58; and the distance (l3) between the rotational axis of the coupling element (12) and the rotational axis of the articulated connecting rod (17) is at least 0.82 and at most 1.02; and the distance (l1) between the rotational axis of the articulated connecting rod (17) and the eccentric rotational axis (18) is at least 1.63 and at most 1.83, relative in each case to a total piston stroke. The invention additionally relates to an internal combustion engine (1) with a multi-joint crank drive (2).

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