Title (en)

VARIABLE MECHANICAL VALVE CONTROL FOR AN INTERNAL COMBUSTION ENGINE

Title (de)

VARIABLE MECHANISCHE VENTILSTEUERUNG EINER BRENNKRAFTMASCHINE

Title (fr)

COMMANDE MECANIQUE VARIABLE DE SOUPAPES D'UN MOTEUR A COMBUSTION INTERNE

Publication

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Application

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Abstract (en)

[origin: WO2006092312A1] Variable mechanical valve control has intermediate lever (7), which is connected to valve push rod (4) by means of shaft (8), in such a way that slide gate roller (6), which is rotatably mounted on shaft, is displaced by camshaft (1) in slide gate (9). First contact surface (10) on intermediate lever is supported in reinforced manner on eccentric shaft (11), or on second contact surface. Lever (16) is displaced using a working curve (13), said lever opening and closing the two-way gas valves (19). Elements are also provided, on a lifter (3) that is located on the push rod for the additional adjustment of the phase position of the valve elevations of the two-way gas valves with simultaneous play-free adjustment of the valve stroke and the invention is also equipped with elements for the additional independently controllable valve stroke opening and closing for each camshaft rotation.

[origin: WO2006092312A1] The aim of the invention is to provide variable mechanical valve control of an internal combustion engine, in particular comprising a bottom camshaft for adjusting a valve stroke and an opening and closing time, said valve control enabling an extremely compact transmission gear to be achieved between the push rod drive and the inlet and outlet valves, to reduce the number of components required for the transmission gear and to obtain a mechanical valve train that is completely variable, with a bottom camshaft. To achieve this, an intermediate lever (7) is connected to a valve push rod (4) by means of a shaft (8), in such a way that a slide gate roller (6), which is rotatably mounted on the shaft (8), is displaced by the camshaft (1) in a slide gate (9). According to the invention, a first contact surface (10) on the intermediate lever (7) is supported in a reinforced manner by means of a spring (5) on an eccentric shaft (11), or on a second contact surface (12) and a lever (16) is displaced using a working curve (13), said lever opening and/or closing the two-way gas valves (19). Elements are also provided, in particular on a lifter (3) that is located on the push rod (4) for the additional adjustment of the phase position of the valve elevations of the two-way gas valves (19) with simultaneous play-free adjustment of the valve stroke and the invention is also equipped with elements for the additional independently controllable valve stroke opening and closing for each camshaft rotation.

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