

Title (en)

VALVE CONTROL FOR HYDRAULIC ACTUATORS BASED ON ELECTORRHEOLOGICAL LIQUIDS

Title (de)

VENTILANSTEUERUNG VON HYDRAULISCHEN AKTOREN AUF BASIS ELEKTORRHEOLOGISCHER FLÜSSIGKEITEN

Title (fr)

COMMANDE DE SOUPAPES FONDEES SUR DES LIQUIDES ELECTORRHEOLOGIQUES POUR ACTIONNEURS HYDRAULIQUES

Publication

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Application

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Abstract (en)

[origin: WO2005085654A1] The invention relates to a valve control for hydraulic actuators, wherein the actuator comprises two pressure medium chambers which are separated by an elastic or moveable element and the pressure medium chambers are joined to four valves, a, b, c, d, which are connected to form a full bridge, based on electrorheological/magnetorheological liquids. The aim of the invention is to further develop said valve in such a way that control and regulatory processes can be carried out in an extremely high dynamic manner. This is achieved by virtue of the fact that the valves can be controlled independently of each other. The following items are taken into account as manipulated variables for the corresponding adjustment: q_l , q_2 and $q_{q,l}$ and $q_{q,2}$ or q_{Δ} , q_{Σ} and $q_{q,l}$ and $q_{q,2}$ or $q_{q,l}$ and $q_{q,2}$. The division of the valve volume flows q_a , q_b , q_c , q_d and voltage signals for controlling the valves a, b, c, d are calculated from said manipulated variables.

IPC 8 full level

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