

Title (en)

Positioning system employing feedforward and feedback control.

Title (de)

Schaltung zur direkten und rückgekoppelten Steuerung einer Positioniereinrichtung.

Title (fr)

Agencement pour la commande directe et par contre-réaction d'un dispositif de positionnement.

Publication

EP 0000261 A1 19790110 (EN)

Application

EP 78300061 A 19780621

Priority

US 81135077 A 19770629

Abstract (en)

[origin: ES470846A1] A positioning system for moving a member between positions in time optimal fashion employs concurrent "feedforward" and "feedback" control. The feedforward control system provides major control and the feedback control system provides minor control to correct for deviations between the actual and a nominal system. The feedback loop may thus be of low bandwidth permitting desensitization to high frequency disturbances or the employment of inherently low bandwidth controlled variables. The "feedforward" control function includes successive portions of opposite polarity corresponding to acceleration and deceleration of the member and also includes a subtractive velocity related component. This function represents the approximate current input to an electromagnetic coil actuator of a nominal system required to move such a member between positions in time optimal fashion.

IPC 1-7

G05B 19/22; **G11B 5/55**

IPC 8 full level

G05B 13/00 (2006.01); **G05B 11/36** (2006.01); **G05B 13/02** (2006.01); **G05B 19/23** (2006.01); **G05D 3/12** (2006.01); **G11B 5/55** (2006.01); **G11B 21/08** (2006.01)

CPC (source: EP US)

G05B 19/232 (2013.01 - EP US); **G11B 5/5547** (2013.01 - EP US); **G05B 2219/41086** (2013.01 - EP US); **G05B 2219/41355** (2013.01 - EP US); **G05B 2219/41434** (2013.01 - EP US)

Citation (search report)

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- US 3881184 A 19750429 - KOEPCKE RICHARD WAYNE, et al
- US 4030132 A 19770614 - IFTIKAR SYED H, et al
- US 4006394 A 19770201 - CUDA JOHN, et al
- CONTROL ENGINEERING, May 1959, New York, R.L. DUTHIE "Feed forward can improve feedback controls", pages 136 to 140.

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