

Title (en)
Training apparatus

Title (de)
Trainingsgerät

Title (fr)
Appareil de musculation

Publication
EP 1614448 A3 20060315 (DE)

Application
EP 05013561 A 20050623

Priority
DE 102004033074 A 20040708

Abstract (en)
[origin: EP1614448A2] Training device comprises a rotary angle sensor (6) assigned to a motor (2). The measuring signal from the sensor is fed to a frequency converter (4) and to a control unit (5). A theoretical value for the torque released from the motor is prescribed for the frequent converter by the control unit. Preferred Features: The control unit controls the position of the exercised part to a theoretical value. The frequency converter controls the torque of the motor to a theoretical value prescribed by the control unit.

IPC 8 full level
A63B 21/005 (2006.01); **H02P 21/00** (2006.01)

CPC (source: EP US)
A63B 21/0058 (2013.01 - EP US); **A63B 21/0059** (2015.10 - EP US); **A63B 2024/0078** (2013.01 - EP US); **A63B 2220/16** (2013.01 - EP US); **A63B 2225/09** (2013.01 - EP US)

Citation (search report)

- [YD] EP 0853961 A1 19980722 - MIEHLICH DIETER [DE]
- [YD] FR 2709067 A1 19950224 - SELIER BRUNO [FR], et al
- [A] RACEK V ET AL: "POSITION CONTROL OF PERMANENT MAGNETS SYNCHRONOUS MOTOR DRIVE WITH 3D FUZZY CONTROLLER", EPE '95: 6TH. EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS. SEVILLA, SEPT. 19 - 21, 1995, EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS, BRUSSELS, EPE ASSOCIATION, B, vol. VOL. & 1 CONF. 6, 19 September 1995 (1995-09-19), pages 1397 - 1402, XP000537557
- [A] LAIW C M ET AL: "A DISCRETE ADAPTIVE INDUCTION POSITION SERVO DRIVE", IEEE TRANSACTIONS ON ENERGY CONVERSION, IEEE INC. NEW YORK, US, vol. 8, no. 3, 1 September 1993 (1993-09-01), pages 350 - 356, XP000415555, ISSN: 0885-8969
- [A] HO E Y Y ET AL: "CONTROL DYNAMICS OF SPEED DRIVE SYSTEMS USING SLIDING MODE CONTROLLERS WITH INTEGRAL COMPENSATION", IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 27, no. 5, 1 September 1991 (1991-09-01), pages 883 - 892, XP000264055, ISSN: 0093-9994
- [A] DESSAINT L A ET AL: "A DSP-BASED ADAPTIVE CONTROLLER FOR A SMOOTH POSITIONING SYSTEM", IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 37, no. 5, 1 October 1990 (1990-10-01), pages 372 - 377, XP000162776, ISSN: 0278-0046

Cited by
EP2186547A1; EP2189190A1; DE102011082027A1; EP2174694A1; EP2174692A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1614448 A2 20060111; EP 1614448 A3 20060315; EP 1614448 B1 20080514; EP 1614448 B2 20120718; AT E395108 T1 20080515; DE 102004033074 A1 20060202; DE 502005004085 D1 20080626; ES 2308340 T3 20081201; ES 2308340 T5 20121026; PL 1614448 T3 20090130; US 2006006836 A1 20060112; US 7211985 B2 20070501

DOCDB simple family (application)
EP 05013561 A 20050623; AT 05013561 T 20050623; DE 102004033074 A 20040708; DE 502005004085 T 20050623; ES 05013561 T 20050623; PL 05013561 T 20050623; US 17623105 A 20050708