

Title (en)

Method for driving the gripper heads of a gripper loom and device therefor

Title (de)

Verfahren zum Antreiben von Greiferköpfen einer Greiferwebmaschine und Antriebsvorrichtung dafür

Title (fr)

Procédé d'entraînement des têtes de pinces d'un métier à pinces et dispositif pour sa mise en oeuvre

Publication

EP 1637635 A1 20060322 (DE)

Application

EP 04021688 A 20040913

Priority

EP 04021688 A 20040913

Abstract (en)

In a method for driving gripper heads in gripper looms by servo-motors (3) directly driving the gripper carrier guiding the heads via cog wheels and supplied with motion control data dependent on successively activatable signals from a control unit, (a) the motors are alternating or multiphase current motors of rated speed 3000 rpm or more and intrinsic inertia less than 0.006 kg.m²>, (b) starting control data are retrievably stored as standardized transfer functions and motion parameters, (c) the activatable signals are high resolution rotation angle signals for the loom main shaft (11) and (d) the transfer functions and motion parameters for issuing motor control signals are retrieved simultaneously (individually or as stored combinations). An independent claim is included for a drive mechanism for gripper heads in gripper looms, comprising: servo-motors (3) outside the fabric former and having drive wheels (34) mounted on the shafts; gripper carriers (21) for guiding the gripper heads (2) into and out of the fabric former, acted on by the drive wheels of the servo-motors via cog elements; and a control unit and memory for supplying with motion control data to the servo-motors, the angle supplier (121) on the main shaft (11) of the loom and the angle supplier (32) on the axes of the servo-motors. The novel features are that: (1) the servo-motors (3) are alternating or multiphase current motors of rated speed 3000-7000 (preferably 550-6500) rpm and maximum rotational moment 140-200 Nm; (2) the angle suppliers on the main shaft and/or the axes of the servo-motors have more than 50 support sites per revolution; and (3) the intrinsic inertia of the moving parts of each servo-motor is less than 0.006 kg.m²>.

IPC 8 full level

D03D 47/27 (2006.01); **D03D 47/18** (2006.01)

CPC (source: EP)

D03D 47/18 (2013.01); **D03D 47/23** (2013.01); **D03D 47/272** (2013.01); **D03D 47/273** (2013.01); **D03D 47/275** (2013.01); **D03D 51/005** (2013.01)

Citation (search report)

- [DXA] DE 2707687 A1 19780824 - LENTZ TEXTILMASCHINEN GMBH
- [A] EP 0526390 A1 19930203 - SULZER AG [CH]
- [AD] DE 4131745 A1 19930325 - INGBUERO UND RATIONALISIERUNG [DE]
- [XA] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 04 30 April 1996 (1996-04-30)
- [XA] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 04 30 April 1996 (1996-04-30)
- [XA] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 04 30 April 1996 (1996-04-30)

Cited by

CN111321505A

Designated contracting state (EPC)

BE CH DE IT LI TR

DOCDB simple family (publication)

EP 1637635 A1 20060322; **EP 1637635 B1 20071031**; DE 502004005368 D1 20071213

DOCDB simple family (application)

EP 04021688 A 20040913; DE 502004005368 T 20040913