

Title (en)
Process to get comparatively identical weaving cycle times in air jet looms and air jet looms for carrying out said process

Title (de)
Verfahren zur Ausführung vergleichsweise identischer Webzykluszeiten in Düsenwebmaschinen und Düsenwebmaschine zur Verfahrensdurchführung

Title (fr)
Procédé pour obtenir des temps de cycle de tissage relativement identiques dans les métiers à jet d'air et métiers à jet d'air pour mettre en oeuvre dudit procédé

Publication
EP 1167599 A3 20050615 (DE)

Application
EP 01111479 A 20010511

Priority
DE 10028049 A 20000606

Abstract (en)
[origin: DE10028049A1] To ensure identical weaving cycles, at a jet loom, the database in the loom control has data at least for the weft flight time by characteristic quality parameters for each type of weft yarn, with a nominal pressure profile. The actual weft yarn flight time is measured for comparison with a nominal flight time. The difference signal is converted by the control into a control signal to act on the valve system to vary the pressure and/or volume of the weft carrying medium by a continuous adjustment of the nominal pressure profile. To give identical weaving cycles at a jet loom, the converted control signal can be used to adjust the loom speed. An Independent claim is included for a jet loom with a valve structure (2) fitted with piezo electric drives (5) to set the pressure and/or volume of the medium to carry the wefts through the shed. Preferred Features: The valve structure has at least one frame valve module (3) with an outlet (11) which is operated by a piezo electric actuator. The valve module is held between two flange plates, with an inlet (16) in at least one flange plate. The piezo electric actuator has a piezo electric rocker, held at one side, with a valve plate (5a) at its free end at the outlet. With a multi-module valve assembly, each piezo electric actuator is controlled separately. At least one sensor (9) is within each valve module, with a signal link to the control. A sensor can be at the outlet, with a signal link to the control. A measurement system works with the piezo electric actuators. The valve plate can be fitted with a permanent magnet, which works with an electrically-energized coil around the outlet to increase/decrease tension on the actuator. Or a spring acts on the actuator to set its tension.

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IPC 8 full level
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CPC (source: EP US)
D03D 47/3033 (2013.01 - EP US); **D03D 47/306** (2013.01 - EP US)

Citation (search report)

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- [A] EP 0534318 A1 19930331 - TSUDAKOMA IND CO LTD [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 017, no. 042 (C - 1020) 26 January 1993 (1993-01-26)

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