Title (en)

Device for feeding weft threads into the shed in air looms

Title (de)

Einrichtung zum Eintragen des Schussfadens in das Webfach einer Luftdüsenwebmaschine

Title (fr)

Dispositif d'insertion de la trame dans la foule d'un métier à jet d'air

Publication

EP 0707101 A3 19971008 (DE)

Application

EP 95115223 A 19950927

Priority

- CH 299394 A 19941004
- CH 171795 A 19950612

Abstract (en)

[origin: EP0707101A2] A device for inserting weft in the shed of an air jet loom has a batten (10) which moves back and forth across the weft thread (18) run and, next the web, a reed comb (8) with first air channel (19) and, spaced on the batten, following its movement and connected to the loom's air source, a number of jet rods (25) which move in and out the shed. The weft, which is transported in the first air channel through the shed by the individual high pressure air jets, is held by means located at the channel exit. Here, each jet rod has a top part (45), i.e. an enclosed jet part (40) directed at the shed and shaped as a point (46) with ellipse cross-section, with at least one exit (43) in the first part (42) of its wall facing the first air channel where the exit is obliquely directed upwards w.r.t. its notional mid-axis (M) by a first angle, alpha and a plane in the weft direction by second angle, alpha ', in the wall part (42). A guide piece, placed next weft exit point, has a second air channel connecting with the first to apply an additional stream of pressurised air to the weft end (18') till it is held extended against the web. Pref. the hollow jet rod comprises a first cylindrical part (30) merging into second conically-shaped part (35) and the jet part about 15 mm long (B). The second part, 3 mm long (A), tapers towards the narrow dimension of the ellipse of the jet part (40) and widens towards its greater dimension. The exit is located in the rod top part, length (C), so that a chamber (44) is formed by the top part and exit inner surfaces (45',43') while w.r.t. to its mid-axis (M) angle alpha is between 8 and 15 degrees and angle alpha ' is between 4 and 10 degrees . Two wall parts (41', 42') slope together at the point and form resp. angles w.r.t. vertical, beta between 15 and 25, pref. 22 degrees and beta ; between 40 and 50, pref. 48 degrees . Other claims relate to the construction of the air jet device to secure the weft thread.

IPC 1-7

D03D 47/30

IPC 8 full level

D03D 47/30 (2006.01)

CPC (source: EP)

D03D 47/302 (2013.01); **D03D 47/308** (2013.01)

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