

Title (en)
Method of controlling yarn tension

Title (de)
Verfahren zur Regelung der Fadenzugkraft

Title (fr)
Procédé pour régler la force de traction d'un fil

Publication
EP 0708189 B1 20001227 (DE)

Application
EP 94810604 A 19941017

Priority
EP 94810604 A 19941017

Abstract (en)
[origin: EP0708189A1] A process for the regulation of thread tension, esp. for weft or warp threads in a loom, entails calculation of a control curve from comparison of actual measured tension data per weft insertion with at least one reference value for tension, calculation of another control curve from at least one further comparison of actual with reference values, control of an adjustment element from one of the control curves and systematic adjustment of the amplitude and phase of the control curve w.r.t. the angle of rotation of the main shaft so to compensate for the deviation between actual and theoretical values of thread tension and to limit the maximum tension. Also claimed is a loom which uses the process and is connected control appts. by signal transfer means so that the sequence of thread tension is controlled in accordance with the weaving procedure. Pref. the actual values are measured periodically at times chosen at will and the amplitude and the phase are alternately adjusted, i.e. the amplitude is held constant and the phase adjusted between two preselected values then the phase is held constant and the amplitude similarly adjusted. The control curve is calculated in accordance with the main shaft rotation angle and incubating at least one adjustment value or signal occurring in the thread travel selected from the following group: adjusting element position, analysis of thread breaks, tendency of the warp threads to cling, the striking force of the reed, shed geometry, weft traverse time, as well as combinations of these. The control curve becomes the reference for at least one weft insertion, for a period or continually. The adjustment values together with the control curve data are entered in a storage medium and periodically, esp. for each weft insertion, updated. The control equipment contains a conventional,

IPC 1-7
D03D 47/34; **D03D 49/18**

IPC 8 full level
D03D 47/34 (2006.01); **D03D 49/18** (2006.01)

CPC (source: EP US)
D03D 47/34 (2013.01 - EP US); **D03D 49/18** (2013.01 - EP US)

Cited by
CN108897293A; BE1012326A3; US6314335B1; WO2005033391A1

Designated contracting state (EPC)
BE DE IT

DOCDB simple family (publication)
EP 0708189 A1 19960424; **EP 0708189 B1 20001227**; DE 59409619 D1 20010201; JP H08269845 A 19961015; US 5669421 A 19970923

DOCDB simple family (application)
EP 94810604 A 19941017; DE 59409619 T 19941017; JP 25417395 A 19950929; US 53755895 A 19951002