

Title (en)

METHOD FOR OPTIMIZING AND MONITORING WEFT INSERTION IN POWER LOOMS

Title (de)

VERFAHREN ZUM OPTIMIEREN UND ÜBERWACHEN DES SCHUSSEINTRAGES AUF WEBMASCHINEN

Title (fr)

PROCEDE POUR L'OPTIMISATION ET LA SURVEILLANCE DE L'INSERTION DE TRAME SUR DES METIERS A TISSER

Publication

**EP 1163384 B1 20030910 (DE)**

Application

**EP 00922537 A 20000322**

Priority

- CH 54199 A 19990322
- EP 0002541 W 20000322

Abstract (en)

[origin: US6467512B1] A method for monitoring the cycle of the weft insertion into a weaving machine. The weft yarn passes a yarn brake and a yarn force sensor and the force acting on the weft yarn is measured in a known fashion and the reaction force of the yarn is converted by a pressure sensitive element into an electrical signal. The electrical signal outputted by the yarn force sensor is electronically amplified in an evaluation unit, is evaluated and is transmitted to an indicator informing the operator of the development of the weft insertion and of disturbances and corrections. For this purpose, the evaluation unit is connected via a data line with a machine control unit. Evaluation unit is supplied with time signals from the machine control unit associated with further machine functions participating at the weft insertion, e.g. the momentary angular position of the main shaft of the machine. The machine control unit receives monitoring signals of the yarn force evaluation via the data line, e.g. for immediate stoppage in case of a yarn breakage occurring during the weft insertion, or to activate a machine related alarm system in case of a disturbance needing the interference by an operator.

IPC 1-7

**D03D 1/00**

IPC 8 full level

**D03D 47/34** (2006.01); **D03D 51/34** (2006.01)

CPC (source: EP KR US)

**D03D 51/34** (2013.01 - EP KR US); **D03J 1/005** (2013.01 - EP US)

Cited by

WO2005014456A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**WO 0056964 A2 20000928**; **WO 0056964 A3 20001228**; AT E249539 T1 20030915; CN 1108406 C 20030514; CN 1347468 A 20020501; DE 50003645 D1 20031016; EP 1163384 A2 20011219; EP 1163384 B1 20030910; JP 2002543297 A 20021217; JP 4546649 B2 20100915; KR 100432266 B1 20040522; KR 20010108375 A 20011207; US 6467512 B1 20021022

DOCDB simple family (application)

**EP 0002541 W 20000322**; AT 00922537 T 20000322; CN 00806466 A 20000322; DE 50003645 T 20000322; EP 00922537 A 20000322; JP 2000606820 A 20000322; KR 20017012095 A 20010922; US 93736802 A 20020115