

Title (en)
Yarn feeding apparatus for textile machines

Title (de)
Fadenliefergerät für Textilmaschinen

Title (fr)
Appareil d'alimentation de fil pour machines textiles

Publication
EP 0985620 B1 20040303 (DE)

Application
EP 99116263 A 19990818

Priority
DE 19840727 A 19980907

Abstract (en)
[origin: EP0985620A2] The yarn feed apparatus (1) at a textile machine, to give a positive yarn (2) feed, has a yarn feed wheel (17) on a carrier (4) which rotates round an axis (D) through a rotary drive (18). The wheel (17) has a yarn entry zone, yarn storage zone (26) and a yarn exit zone (36). The yarn exit zone (36) has a circular cross section. The cross section of the yarn storage zone (26) deviates from a concentric circle round the axis (D), at least in sections. The yarn entry zone has a solid surface, forming a concentric circle round the axis (D) at each point. The entry zone surface has a conical tapering towards the yarn storage zone (26) with the conical surface at an angle of ≥ 60 degrees to the axis (D) and preferably 75 degrees. The yarn exit zone (36) has a closed surface, forming a concentric circle to the axis (D) at each point, as an expanding cone away from the storage zone (26). Or the surface can be a curved surface on a torus with a curvature radius smaller than the radius of the feed wheel (17). The yarn storage zone (26), between the entry and exit (36) zones, has a solid surface with a polygon cross section concentric to the axis (D) at each point with straight edges or edges which are not straight. The cross section of the yarn storage zone (26) is defined radially outwards by preferably rounded laying sections, with the yarn storage zone (26) radially inwards between them as convex or concave curved or flat sections. The yarn delivery wheel (17) is in one piece with a shaft, wholly of ceramic, sapphire, quartz, a material with a diamond content, nitride or carbide. Or it has a basic body of metal and preferably aluminum. The metal body can be clad with a coating containing oxygen and a component which differs from the material of the body. The yarn feed wheel (17) can have a wall at one end side with a center drilling for preferably a shaft to hold the wheel directly.

IPC 1-7
B65H 51/22

IPC 8 full level
B65H 51/22 (2006.01); **D04B 15/48** (2006.01)

CPC (source: EP KR US)
B65H 67/06 (2013.01 - KR); **D04B 15/48** (2013.01 - EP US)

Designated contracting state (EPC)
DE ES FR GB GR IT PT

DOCDB simple family (publication)
EP 0985620 A2 20000315; EP 0985620 A3 20000412; EP 0985620 B1 20040303; AR 021791 A1 20020807; AU 6464299 A 20000327; BR 9913514 A 20010605; CA 2343271 A1 20000316; CN 1211268 C 20050720; CN 1314866 A 20010926; CZ 2001817 A3 20010912; DE 19840727 A1 20000525; DE 59908700 D1 20040408; EG 22127 A 20020830; ES 2216392 T3 20041016; HK 1040508 A1 20020614; HK 1040508 B 20060224; ID 29548 A 20010906; JP 2002524367 A 20020806; JP 3459061 B2 20031020; KR 100434621 B1 20040605; KR 20010072972 A 20010731; MY 125289 A 20060731; PL 189296 B1 20050729; PL 347944 A1 20020422; PT 985620 E 20040630; RU 2200697 C2 20030320; SK 284478 B6 20050401; SK 2912001 A3 20011008; TR 200100669 T2 20010723; TW I234539 B 20050621; UA 53801 C2 20030217; US 6568620 B1 20030527; WO 0014002 A1 20000316

DOCDB simple family (application)
EP 99116263 A 19990818; AR P990104450 A 19990903; AU 6464299 A 19990813; BR 9913514 A 19990813; CA 2343271 A 19990813; CN 99810179 A 19990813; CZ 2001817 A 19990813; DE 19840727 A 19980907; DE 59908700 T 19990818; DE 9902548 W 19990813; EG 111699 A 19990906; ES 99116263 T 19990818; HK 02102163 A 20020321; ID 20010411 A 19990813; JP 2000568770 A 19990813; KR 20017002418 A 20010226; MY PI19993306 A 19990804; PL 34794499 A 19990813; PT 99116263 T 19990818; RU 2001109247 A 19990813; SK 2912001 A 19990813; TR 200100669 T 19990813; TW 88114780 A 19990830; UA 01031480 A 19990813; US 78670901 A 20010307