Title (en)

Device and method for applying a treating liquid to a running yarn

Title (de)

Vorrichtung und Verfahren zum Auftragen eines Präparationsmittels auf einen laufenden Faden

Title (fr)

Dispositif et procédé pour l'apport d'un liquide de traitement sur un fil textile en défilement

Publication

EP 1039011 B1 20041103 (DE)

Application

EP 00105975 A 20000324

Priority

- DE 19913439 A 19990325
- DE 19927366 A 19990616

Abstract (en)

[origin: EP1039011A2] The appts. to apply a lubricant to a running yarn has a supply container (1) for the preparation divided into compartments (2.1,2.2) for the components (3.1,3.2) of the lubricant. The feed system (5) has a number of inlet channels (9.1,9.2) at the entry side, with separate links to the container compartments (2.1,2.2), for their part-flows to be combined at the outlet side of the feed system (5). At least one dosing unit is in front of the feed system (5), to give a dosed vol. of at least one part-flow. A separate dosing unit (7.1,7.2) is pref. at each flow link (8.1,8.2) between the supply container (1) and the feed system (5), controlled independently of each other. The dosing units can be pumps. The feed system (5) has a mixing chamber (10), where the part-flows are combined. The mixing chamber (10) has one or more mixers (11) to blend the components (3.1,3.2) of the yarn lubricant together. The mixer can be a dynamic mixer. The applicator (14) has a yarn guide (15) with a track (16) forming the yarn channel (16) where a drilling (17) through the guide carries the main lubricant flow to the yarn (18). The applicator (14) can also have a jet to spray the lubricant at the yarn (18). The applicator (14) can also have a rotating roller partially immersed in a container filled with the main lubricant flow, to transfer it to the running yarn (18). An Independent claim is included for the treatment of a running yarn with a lubricant where the lubricant components are held separately in the supply container, to be fed as separate part-flows to be combined into a main application flow. Preferred Features: The part-flows are brought into the main flow by independently dosed vols., where at least one dosed part-flow can be set to give the proportions for the component parts of the main mixed flow. The main flow is composed of the sum of the separate part-flows, to be delivered to the applicator. The components of the yarn lubricant are blended together in the mixing chamber. A further Independent claim is included for a dosing pump with its inlet connected to the mixing chamber, where the part-flows are combined. Preferred Features: The mixers in the mixing chamber are at least partially mounted to a rotating shaft which has a common drive with the impeller which forms the mixing shaft where it enters into the chamber, and is fitted with a motor at the other end. The impeller and the mixing shaft can be separate, interconnected by a reduction gearing. The impeller is composed of one or more pairs of cogwheels, with one or more pump outlets for each pair. The paired cogwheels are driven by a common drive shaft, and the dosed vol. flows are equal for each pair of cogwheels.

IPC 1-7

D06B 23/20

IPC 8 full level

D01H 13/30 (2006.01); **B01F 25/62** (2022.01); **D06B 23/20** (2006.01)

CPC (source: EP KR US)

B01F 25/43161 (2022.01 - EP KR US); **B01F 25/62** (2022.01 - EP US); **B01F 27/50** (2022.01 - EP US); **B01F 33/822** (2022.01 - EP US); **B01F 35/7176** (2022.01 - EP US); **B01F 35/882** (2022.01 - EP US); **D01H 13/30** (2013.01 - KR); **D06B 23/205** (2013.01 - EP US)

Cited by

CN105350195A; CH709953A1; EP2249034A3; US9719192B2; WO2007033696A1; WO2018130445A1; US11221006B2; DE102017000760A1

Designated contracting state (EPC)

CH DE FR GB IT LI

DOCDB simple family (publication)

EP 1039011 A2 20000927; **EP 1039011 A3 20010411**; **EP 1039011 B1 20041103**; CN 1135274 C 20040121; CN 1268589 A 20001004; DE 50008461 D1 20041209; KR 100665546 B1 20070109; KR 20010014617 A 20010226; TW 509738 B 20021111; US 6543580 B1 20030408

DOCDB simple family (application)

EP 00105975 A 20000324; CN 00104663 A 20000324; DE 50008461 T 20000324; KR 20000014760 A 20000323; TW 89104611 A 20000314; US 53609800 A 20000324