

Title (en)

DEVICE AND METHOD FOR IN-LINE THREAD TREATMENT

Title (de)

VORRICHTUNG UND VERFAHREN ZUR INLINE-FADENBEHANDLUNG

Title (fr)

DISPOSITIF ET PROCÉDÉ DE TRAITEMENT EN LIGNE D'UN FIL

Publication

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Application

EP 16812049 A 20160616

Priority

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Abstract (en)

[origin: WO2016204687A1] A device and method for in-line treatment of a thread are disclosed. The device comprises treatment and fixation units located downstream a thread feeding unit. A thread consuming system comprising a thread consuming device, such as an embroidery machine and/or a weaving machine and/or a sewing machine and the device is also disclosed.

IPC 8 full level

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CPC (source: EP IL KR SE US)

B41J 3/407 (2013.01 - IL); **D03J 1/04** (2013.01 - EP IL KR SE US); **D04B 35/22** (2013.01 - IL); **D05B 67/00** (2013.01 - EP IL KR SE US); **D05C 11/24** (2013.01 - EP IL KR SE US); **D06B 11/0023** (2013.01 - EP IL); **D06P 5/30** (2013.01 - EP IL KR SE US); **B41J 3/407** (2013.01 - SE); **D03J 1/04** (2013.01 - SE); **D04B 35/22** (2013.01 - SE)

Citation (search report)

- [X] GB 2166766 A 19860514 - GERBER SCIENT INC
- [X] US 4465005 A 19840814 - EGUCHI YASUKATA [JP], et al
- [X] US 4538535 A 19850903 - HANYU SUSUMU [JP], et al
- [X] US 6189989 B1 20010220 - HIRABAYASHI HIROMITSU [JP], et al
- [A] WO 2010076823 A1 20100708 - TELECOM ITALIA SPA [IT], et al
- [A] JP 2009273675 A 20091126 - DATSUKUSU KK
- [A] JP H09239179 A 19970916 - BROTHER IND LTD
- [A] JP H06304359 A 19941101 - CANON KK
- See references of WO 2016204687A1

Designated contracting state (EPC)

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WO 2016204687 A1 20161222; AU 2016280358 A1 20180201; AU 2016280358 B2 20210422; BR 112017027129 A2 20180814; BR 112017027129 B1 20230110; CA 2989761 A1 20161222; CA 2989761 C 20220524; CN 107849770 A 20180327; EA 039380 B1 20220120; EA 201890036 A1 20180629; EP 3310956 A1 20180425; EP 3310956 A4 20181205; EP 3310956 B1 20230607; EP 3310956 C0 20230607; HK 1252466 A1 20190524; IL 256358 A 20180228; IL 256358 B 20211031; JP 2018525548 A 20180906; JP 7034909 B2 20220314; KR 102579177 B1 20230914; KR 20180017201 A 20180220; MX 2017016495 A 20180706; PH 12017502340 A1 20180702; PL 3310956 T3 20231002; SE 1550841 A1 20161218; SE 540990 C2 20190219; UA 124727 C2 20211110; US 2018171520 A1 20180621

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