

Title (en)

Apparatus for solvent recovery from ink jet printer including thermoelectric cooling

Title (de)

Apparat zur Lösungsmittelrückgewinnung von einem Tintenstrahldrucker mit thermoelektrischer Kühlvorrichtung

Title (fr)

Appareil de récupération de solvant d'imprimante à jet d'encre incluant un dispositif de refroidissement thermoélectrique

Publication

**EP 0816097 A3 19981223 (EN)**

Application

**EP 97302762 A 19970422**

Priority

US 67399496 A 19960701

Abstract (en)

[origin: EP0816097A2] An ink supply system for ink jet printers includes a closed ink supply tank containing ink and solvent. A thermoelectric cooling assembly is connected by a tube to the ink supply tank. The thermoelectric cooling assembly includes a heat exchanger and a thermoelectric cooling module. The tube is connected to the air space of the ink supply tank and the thermoelectric cooling assembly such that air containing evaporated solvent from the tube is cooled by the thermoelectric cooling module such that solvent in the air will condense. Preferably, the thermoelectric cooling assembly is positioned above the ink supply tank so that condensed solvent drains into the ink supply tank. Preferably, a solvent make up container is connected to the ink supply tank for supplying solvent to the ink supply tank, and an equalizing conduit connects the solvent make up container airspace to one of the ink supply tank airspace and the tube to provide for equalization of the fluid pressure between the solvent make up container and the ink supply tank. Preferably, a solvent supply device supplies solvent to the solvent make up container. The solvent supply device includes a solvent supply container for containing solvent, a support device for supporting the solvent supply container and a conduit connecting the solvent supply container to the solvent make up container such that solvent can be supplied to the solvent make up container from the solvent supply container without venting the solvent make up container to the atmosphere.

IPC 1-7

**B41J 2/175**

IPC 8 full level

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CPC (source: EP)

**B41J 2/175** (2013.01); **B41J 29/377** (2013.01)

Citation (search report)

- [DPXPY] US 5532720 A 19960702 - KRUEGER WILLIAM J [US], et al
- [DE] EP 0805038 A1 19971105 - QUAD TECH [US]
- [A] US 4121222 A 19781017 - DIEBOLD JOSEPH M, et al
- [A] US 4862192 A 19890829 - SLOMIANNY JAN [DE]
- [X] WO 9317869 A1 19930916 - WILLETT INT LTD [GB]
- [X] DRISCOLL, P.R. ET AL.: "Evaporation recovery system", IBM TECHNICAL DISCLOSURE BULLETIN., vol. 25, no. 3a, August 1982 (1982-08-01), NEW YORK US, pages 946 - 947, XP002081594
- [Y] PATENT ABSTRACTS OF JAPAN vol. 015, no. 491 (M - 1190) 12 December 1991 (1991-12-12)
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 588 (M - 912) 25 December 1989 (1989-12-25)
- [A] PATENT ABSTRACTS OF JAPAN vol. 18, no. 154 (M - 1577) 15 March 1994 (1994-03-15)

Cited by

CN104786652A; CN104369538A; EP1308300A1; EP3284601A1; FR3055108A1; CN107757135A; US10976263B2; US11034145B2; US7665824B2; US6874877B2; US10179456B2; US10549538B2

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