

Title (en)

CLEANING SYSTEM UTILIZING AN ORGANIC CLEANING SOLVENT AND A PRESSURIZED FLUID SOLVENT

Title (de)

REINIGUNGSSYSTEM MIT EINEM ORGANISCHEN UND EINEM UNTER DRUCK STEHENDEN FLÜSSIGEN LÖSUNGSMITTEL

Title (fr)

SYSTEME DE NETTOYAGE UTILISANT UN SOLVANT DE NETTOYAGE ORGANIQUE ET UN SOLVANT LIQUIDE SOUS PRESSION

Publication

**EP 1224352 A1 20020724 (EN)**

Application

**EP 00970902 A 20001013**

Priority

- US 0028433 W 20001013
- US 41934599 A 19991015
- US 68677300 A 20001011

Abstract (en)

[origin: WO0129306A1] A cleaning system that utilizes an organic cleaning solvent and pressurized fluid solvent is disclosed. The system has no conventional evaporative hot air drying cycle. Instead, the system utilizes the solubility of the organic solvent in pressurized fluid solvent as well as the physical properties of pressurized fluid solvent. After an organic solvent cleaning cycle, the solvent is extracted from the textiles at high speed in a rotating drum in the same way conventional solvents are extracted from textiles in conventional evaporative hot air dry cleaning machines. Instead of proceeding to a conventional drying cycle, the extracted textiles are then immersed in pressurized fluid solvent to extract the residual organic solvent from the textiles. This is possible because the organic solvent is soluble in pressurized fluid solvent. After the textiles are immersed in pressurized fluid solvent, pressurized fluid solvent is pumped from the drum. Finally, the drum is de-pressurized to atmospheric pressure to evaporate any remaining pressurized fluid solvent, yielding clean, solvent free textiles. The organic solvent is preferably dipropylene glycol n-butyl ether, tripropylene glycol n-butyl ether or tripropylene glycol methyl ether, a mixture thereof, or a similar solvent and the pressurized fluid solvent is preferably densified carbon dioxide.

IPC 1-7

**D06L 1/02**

IPC 8 full level

**D06L 1/02** (2006.01); **B08B 3/02** (2006.01); **B08B 3/08** (2006.01); **B08B 3/12** (2006.01); **B08B 7/00** (2006.01); **C11D 7/26** (2006.01); **C11D 7/50** (2006.01); **C11D 11/00** (2006.01); **D06F 43/08** (2006.01)

CPC (source: EP)

**B08B 3/12** (2013.01); **B08B 7/0021** (2013.01); **C11D 7/5022** (2013.01); **C11D 7/263** (2013.01); **C11D 7/264** (2013.01); **C11D 7/266** (2013.01); **C11D 2111/12** (2024.01)

Citation (search report)

See references of WO 0129306A1

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 0129306 A1 20010426**; AT E337428 T1 20060915; AU 777996 B2 20041111; AU 8021800 A 20010430; BR 0014770 A 20020917; BR 0014770 B1 20120320; CA 2388913 A1 20010426; CA 2388913 C 20040413; DE 60030305 D1 20061005; DE 60030305 T2 20070823; EP 1224352 A1 20020724; EP 1224352 B1 20060823; JP 2004515560 A 20040527; MX PA02003816 A 20041014; NO 20021765 D0 20020415; NO 20021765 L 20020617

DOCDB simple family (application)

**US 0028433 W 20001013**; AT 00970902 T 20001013; AU 8021800 A 20001013; BR 0014770 A 20001013; CA 2388913 A 20001013; DE 60030305 T 20001013; EP 00970902 A 20001013; JP 2001532281 A 20001013; MX PA02003816 A 20001013; NO 20021765 A 20020415