

## Title (en)

SOLVENT EXTRACTION PROCESS FOR RECOVERING NICKEL AND COBALT FROM LEACH SOLUTIONS

## Title (de)

LÖSUNGSMITTELEXTRAKTIONSVERFAHREN ZUR NICKEL- UND COBALTGEWINNUNG AUS AUSLAUGLÖSUNGEN

## Title (fr)

PROCEDE D'EXTRACTION DE SOLVANT DESTINE A EXTRAIRE LE NICKEL ET LE COBALT DE SOLUTIONS DE LIXIVIATION

## Publication

**EP 1330555 A4 20050831 (EN)**

## Application

**EP 01973802 A 20010914**

## Priority

- AU 0101161 W 20010914
- AU PR016900 A 20000915
- AU PR111900 A 20001030

## Abstract (en)

[origin: WO0222896A1] A method of separating nickel, cobalt or both from other cations contained in a leach solution, the method including the steps of subjecting the leach solution to separate solvent extraction steps using an organophosphoric acid, a carboxylic acid and an organophosphinic acid.

## IPC 1-7

**C22B 3/26**; **C22B 3/32**; **C22B 3/38**; **C22B 23/00**

## IPC 8 full level

**C22B 3/26** (2006.01); **C22B 3/32** (2006.01); **C22B 3/38** (2006.01)

## CPC (source: EP US)

**C22B 3/32** (2021.05 - EP US); **C22B 3/3842** (2021.05 - EP US); **C22B 3/3846** (2021.05 - EP US); **C22B 23/0453** (2013.01 - EP US); **C22B 23/0484** (2013.01 - EP US); **Y02P 10/20** (2015.11 - EP US)

## Citation (search report)

- [Y] US 4528167 A 19850709 - PRESTON JOHN S [ZA]
- [Y] AU 4089096 A 19960718 - LIONORE AUSTRALIA AVALON PTY LTD
- [A] WO 9856482 A1 19981217 - WMC RESOURCES LTD [AU], et al
- [XDY] "Nickel/Cobalt Pressure Leaching & Hydrometallurgy Forum, May 1997, Perth, Western Australia", 1997, ALTA METALLURGICAL SERVICES, AUSTRALIA, XP001206859
- [Y] PRESTON J S ET AL: "SYNERGISTIC EFFECTS IN THE SOLVENT EXTRACTION OF SOME DIVALENT METALS BY MIXTURES OF VERSATIC 10 ACID AND PYRIDINECARBOXYLATE EXTENDERS", JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY. (INTERNATIONAL JOURNAL OF BIOTECHNICAL AND CHEMICAL PROCESSES), ELSEVIER APPLIED SCIENCE PUBLISHERS. BARKING, GB, vol. 61, no. 2, 1 October 1994 (1994-10-01), pages 159 - 165, XP000469822, ISSN: 0268-2575
- [A] DEVI N B ET AL: "SODIUM SALTS OF D2EHPA, PC-88A AND CYANEX-272 AND THEIR MIXTURES AS EXTRACTANTS FOR COBALT (II)", HYDROMETALLURGY, ELSEVIER SCIENTIFIC PUBLISHING CY. AMSTERDAM, NL, vol. 34, no. 3, January 1994 (1994-01-01), pages 331 - 342, XP000430416, ISSN: 0304-386X
- See also references of WO 0222896A1

## Cited by

CN104724864A; CN107904402A; CN111187907A

## Designated contracting state (EPC)

AT BE FR GR

## DOCDB simple family (publication)

**WO 0222896 A1 20020321**; CA 2421970 A1 20020321; CU 23103 A3 20051220; EP 1330555 A1 20030730; EP 1330555 A4 20050831; US 2004050212 A1 20040318

## DOCDB simple family (application)

**AU 0101161 W 20010914**; CA 2421970 A 20010914; CU 20030050 A 20030303; EP 01973802 A 20010914; US 38068503 A 20030917