

Title (en)

Process for the treatment and conditioning of solid or liquid effluents charged with heavy metals

Title (de)

Verfahren zur Behandlung und Konditionierung von schwermetallhaltigen Suspensionen und Flüssigkeiten

Title (fr)

Procédé de traitement et de conditionnement d'effluents solides ou liquides chargés en métaux lourds

Publication

EP 0687483 A1 19951220 (FR)

Application

EP 95401367 A 19950613

Priority

FR 9407297 A 19940615

Abstract (en)

Processing of solid or liq. effluents contg. heavy metals comprises: (a) treating a liq. effluent or liq. extract of a solid effluent with a reducing agent to obtain a process soln.; (b) contacting the process soln. with a solvent in a first extraction vessel, where the solvent is capable of selectively extracting heavy metals, anions and alkali(ne earth)metals and comprises an organophosphorus extractant and a hydrocarbon; (c) passing the organic phase from (b) to a second extraction vessel and contacting it with an aq. soln. capable of extracting heavy metals from the organic phase; (d) contacting the aq. phase from (c) with a pptn. capable of precipitating. all the heavy metals in the form of insoluble and vitrifiable chemical species; (e) filtering off the ppte. and washing it with water; (f) recycling the filtrate from (e) for addn. to the process soln. from (a); and (g) vitrifying the ppte. from (e).

IPC 1-7

A62D 3/00

IPC 8 full level

A62D 3/00 (2006.01); **A62D 3/33** (2007.01); **A62D 3/37** (2007.01); **A62D 101/24** (2007.01); **A62D 101/43** (2007.01)

CPC (source: EP)

A62D 3/33 (2013.01); **A62D 3/37** (2013.01); **A62D 2101/24** (2013.01); **A62D 2101/43** (2013.01); **A62D 2203/02** (2013.01)

Citation (applicant)

- US 4873065 A 19891010 - BRAUN HARTMUT [DE], et al
- US 5041398 A 19910820 - KAUSER DENNIS E [US], et al

Citation (search report)

- [A] EP 0480243 A1 19920415 - WISER OY [FI]
- [A] EP 0409140 A1 19910123 - COLTEC IND INC [US]
- [A] DD 289030 A5 19910418 - INGENIEURBETRIEB ANLAGENBAU LE [DE]
- [A] DATABASE WPI Week 8619, Derwent World Patents Index; AN 86-122389

Cited by

FR2760663A1; FR2760662A1; WO9921619A1

Designated contracting state (EPC)

BE CH DE ES GB IT LI NL

DOCDB simple family (publication)

EP 0687483 A1 19951220; **EP 0687483 B1 19980826**; DE 69504248 D1 19981001; DE 69504248 T2 19990401; ES 2123221 T3 19990101; FR 2721237 A1 19951222; FR 2721237 B1 19960802

DOCDB simple family (application)

EP 95401367 A 19950613; DE 69504248 T 19950613; ES 95401367 T 19950613; FR 9407297 A 19940615