

Title (en)

Process for the oxidation of water insoluble organic compounds.

Title (de)

Verfahren zur Oxidation wasserunlöslicher organischer Verbindungen.

Title (fr)

Procédé de l'oxidation de composés organiques/insolubles dans l'eau.

Publication

EP 0442088 A1 19910821 (DE)

Application

EP 90124224 A 19901214

Priority

DE 4001782 A 19900123

Abstract (en)

[origin: DE4001782A1] Oxidn. of organic pollutants contg. C, H, O and other elements in bound form is effected by reaction with HNO_3 at 150-350 deg.C and 6-350 bar. The process is characterised in that water-insol. chlorinated hydrocarbons are oxidised (SiC). Pref. chlorinated dibenzodioxins and chlorinated dibenzofurnas are oxidised. In an examples, the substance oxidised is (a) a substance called chlophen, (b) 1,1-dichloroethane, or (c) chloranil contg. 15ppm octachlorodibenzo-p-dioxin and 1.2ppm octachlorodibenzofuran. The reaction is effected in an autoclave at 30-100 bar. The HNO_3 is used in an amt. of 2-40 (esp. 2.5-7) g per g of pollutant. In an example, a mixt. of 30g chlophen and 910g of 20% HNO_3 was heated in a Ta autoclave at 280 deg.C and 86 bar for 2 hr. After cooling, the prod. comprised a clear aq. phase and no oily phase. The aq. phase had a COD of 2.4g/l and contained no chlorinated dibenzo-p-dioxins or dibenzofurans. @ (3pp Dwg.No.0/0).

Abstract (de)

Wasserunlösliche chlorierte Kohlenwasserstoffe können dadurch weitgehend abgebaut werden, daß sie mit Salpetersäure versetzt und bei Drucken von 6 bar bis 350 bar auf Temperaturen von 150° bis 350° C erhitzt werden.

IPC 1-7

A62D 3/00; **C07B 33/00**

IPC 8 full level

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CPC (source: EP US)

A62D 3/38 (2013.01 - EP US); **A62D 2101/22** (2013.01 - EP US); **A62D 2101/28** (2013.01 - EP US)

Citation (search report)

- [A] US 4080168 A 19780321 - ABU-SAMRA ADEL, et al
- [A] L. FRADKIN et al.: "Technologies for treatment, reuse, and disposal of polychlorinated, biphenyl wastes", Januar 1982, Teil 4.6, Seiten 17-19, National Technical Information Service, Springfield, VA, US; "Catalyzed wet oxidation"

Cited by

EP0503387A1; US5232605A

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0442088 A1 19910821; **EP 0442088 B1 19930421**; AT E88368 T1 19930515; DE 4001782 A1 19910725; DE 59001261 D1 19930527; DK 0442088 T3 19930517; ES 2055284 T3 19940816; US 5174985 A 19921229

DOCDB simple family (application)

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