

Title (en)
METHOD FOR TREATING A NUCLEAR PROCESS OFF-GAS STREAM.

Title (de)
VERFAHREN ZUM BEHANDELN EINES WÄHREND EINES KERNVERFAHRENS ENTSTANDENEN ABGASSTROMES.

Title (fr)
METHODE POUR LE TRAITEMENT DE COURANTS GAZEUX EMIS PENDANT UN PROCEDE NUCLEAIRE.

Publication
EP 0032949 A4 19820108 (EN)

Application
EP 80901636 A 19810224

Priority
US 6397079 A 19790806

Abstract (en)
[origin: WO8100413A1] Method for selectively removing and recovering the noble gas and other gaseous components typically emitted during nuclear process operations. The method is adaptable and useful for treating dissolver off-gas effluents released during reprocessing of spent nuclear fuels whereby to permit radioactive contaminant recovery prior to releasing the remaining off-gases to the atmosphere. Briefly, the method sequentially comprises treating the off-gas stream to preliminarily remove NO_x, hydrogen and carbon-containing organic compounds, and semivolatile fission product metal oxide components therefrom (11 and 16); adsorbing iodine components on silver-exchanged mordenite (17); removing water vapor carried by said stream by means of a molecular sieve (31); selectively removing the carbon dioxide components of said off gas stream by means of a molecular sieve (51); selectively removing xenon in gas phase by passing said stream through a molecular sieve (71) comprising silver-exchanged mordenite; selectively separating krypton from oxygen by means of a molecular sieve (91) comprising silver-exchanged mordenite; selectively separating krypton from the bulk nitrogen stream using a molecular sieve (111) comprising silver-exchanged mordenite cooled to about -140 to -160 C; concentrating the desorbed krypton upon a molecular sieve (131) comprising silver-exchange mordenite cooled to about -140 to -160 C; and further cryogenically concentrating, and then recovering for storage, the desorbed krypton (137).

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C09K 3/00

IPC 8 full level
C01B 23/00 (2006.01); **G21F 9/00** (2006.01); **G21F 9/02** (2006.01)

CPC (source: EP)
G21F 9/02 (2013.01)

Citation (search report)

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FR

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WO 8100413 A1 19810219; EP 0032949 A1 19810805; EP 0032949 A4 19820108; GB 2070454 A 19810909; GB 2070454 B 19831207; JP S56500976 A 19810716

DOCDB simple family (application)
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