

Title (en)
COMPACT WASTEWATER CONCENTRATOR USING WASTE HEAT

Title (de)
KOMPAKTER ABWASSERKONZENTRATOR UNTER VERWENDUNG VON ABWÄRME

Title (fr)
CONCENTRATEUR D'EAUX USÉES COMPACT UTILISANT UNE CHALEUR RÉSIDUAIRE

Publication
EP 2473446 A2 20120711 (EN)

Application
EP 10805026 A 20100729

Priority

- US 22965009 P 20090729
- US 70546210 A 20100212
- US 2010043647 W 20100729

Abstract (en)
[origin: WO2011014616A2] A compact and portable liquid concentrator includes a gas inlet, a gas exit and a flow corridor connecting the gas inlet and the gas exit, wherein the flow corridor includes a narrowed portion that accelerates the gas through the flow corridor. A liquid inlet injects liquid into the gas stream at a point prior to the narrowed portion so that the gas-liquid mixture is thoroughly mixed within the flow corridor, causing a portion of the liquid to be evaporated. A demister or fluid scrubber downstream of the narrowed portion removes entrained liquid droplets from the gas stream and re-circulates the removed liquid to the liquid inlet through a re-circulating circuit. Fresh liquid to be concentrated is also introduced into the re-circulating circuit at a rate sufficient to offset the amount of liquid evaporated in the flow corridor.

IPC 8 full level
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CPC (source: EP RU US)
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US 2010043647 W 20100729; AR P100102736 A 20100728; AR P100102757 A 20100729; AR P100102758 A 20100729; AU 2010279004 A 20100729; AU 2010279005 A 20100729; AU 2015203696 A 20150624; AU 2017221790 A 20170830; BR 112012001718 A 20100729; BR 112012001724 A 20100729; CA 2768188 A 20100729; CA 2769381 A 20100729; CN 201080034379 A 20100729; CN 201080034380 A 20100729; CN 201510438348 A 20100729; EP 10805026 A 20100729; EP 10805027 A 20100729; JP 2012523025 A 20100729; JP 2012523026 A 20100729; JP 2015200065 A 20151008; MX 2012001291 A 20100729; MX 2012001292 A 20100729; RU 2012104408 A 20100729; RU 2012104412 A 20100729; RU 2015113354 A 20100729; UA A201201696 A 20100729; UA A201201697 A 20100729; US 2010043648 W 20100729