

Title (en)
FILTER DEVICE WITH A PUMP UNIT

Title (de)
FILTERVORRICHTUNG MIT PUMPENEINRICHTUNG

Title (fr)
DISPOSITIF FILTRE POUR UN ENSEMBLE POMPE

Publication
EP 1991342 A1 20081119 (DE)

Application
EP 06776719 A 20060809

Priority
• EP 2006007897 W 20060809
• EP 05018567 A 20050826
• EP 06776719 A 20060809

Abstract (en)
[origin: EP1757356A1] Filter device for the filtration of liquid loaded with protein, polysaccharides and/or fermentation yeast, has cross flow filter modules, a cross flow membrane filter candle placed inside the housing, and a housing (19) comprising a non-filtrate inlet, a non-filtrate outlet and filtrate outlet. The filtrate F is drawn transversally to the flow of non-filtrate through the membrane filter candle. A hose pump mechanism is arranged in a filtrate drain that is connected with the filtrate outlet. The cross-flow filter modules and/or module units are arranged in row manner. Filter device for the filtration of liquid loaded with protein, polysaccharides and/or fermentation yeast, has cross flow filter modules, a cross flow membrane filter candle placed inside the housing, and a housing (19) comprising a non-filtrate inlet, a non-filtrate outlet and filtrate outlet. The filtrate F is drawn transversally to the flow of non-filtrate through the membrane filter candle. A hose pump mechanism is arranged in a filtrate drain that is connected with the filtrate outlet. The cross-flow filter modules and/or module units are arranged in row manner. During filtering, the pump mechanism intermittently pumps filtrate back against the direction of flow while not intermittently blocking the flow of filtrate. The hose pump is continuously driven with smaller number of revolutions with pause intervals. The filtrate flow is not blocked in normal position of the pump mechanism. The pump mechanism is arranged between the cross flow filter module and a buffer storage for filtrate. The flow direction and/or feed direction of the pump are opposed to the flow direction of the filtrate. The pump mechanism comprises a tube pump and exhibits a tube (26) and a rotary sliding block (18). The rotary sliding block compresses the tube in its rotation in a first angle area beta , and the non-filtrate is supplied against the flow direction. The rotary sliding block does not compress the tube in a second angle area alpha , and the filtrate not-blocked by the hose pump flows into the filtrate flow direction. An independent claim is included for a procedure for the filtration of liquid loaded with protein, polysaccharides and/or yeast.

IPC 8 full level
B01D 65/08 (2006.01); **C12H 1/06** (2006.01); **F04B 43/12** (2006.01)

CPC (source: EP US)
B01D 61/147 (2013.01 - EP); **B01D 61/22** (2013.01 - EP); **B01D 65/02** (2013.01 - EP); **B01D 65/08** (2013.01 - EP); **C12H 1/063** (2013.01 - EP US); **F04B 43/1238** (2013.01 - EP); **B01D 2313/243** (2013.01 - EP); **B01D 2321/00** (2013.01 - EP); **B01D 2321/04** (2013.01 - EP); **B01D 2321/282** (2022.08 - US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1757356 A1 20070228; EP 1991342 A1 20081119; WO 2007022868 A1 20070301

DOCDB simple family (application)
EP 05018567 A 20050826; EP 06776719 A 20060809; EP 2006007897 W 20060809