

Search history

Search 1: SFT=(Wastewater and treatment) (Results 94453)
Search 2: 1 and reed* (Results 953)
Search 3: 2 and aerobic and anaerobic (Results 237)
Search 4: 3 and denitrification (Results 79)
Search 5: 4 and PD<20150424 (Results 68)
Search 6: RF=(NC20170011807) (Results 3)

Title: VERTICAL-HORIZONTAL FILTER UNIT FOR THE BIOLOGICAL PURIFICATION OF POLLUTED WATER

Abstract: The present invention relates to a vertical-horizontal filter unit for the biological purification of polluted water, comprising an upper zone of a soil patch planted with plants, having inlets for the polluted water, and arranged underneath a sand layer with a lower filter zone made of gravel and at least one removal point for the purified water, wherein between the upper and lower filter zones a barrier layer with openings is arranged and the filter unit is sealed against the soil on the sides and at the bottom. The openings in the barrier layer are arranged along the edge and/or the barrier layer does not reach the edge of the patch completely. The invention is characterized in that the upper zone acts as an aerobically cleaning zone and the lower zone as an anaerobically cleaning zone.

Classifications:

International (IPC 8-9): B01D24/12 C02F1/00 C02F101/10

C02F101/16 C02F3/06 C02F3/30 (Advanced/Invention);

C02F101/10 C02F101/16 (Advanced/Non-invention);

B01D24/02 C02F1/00 C02F3/30 (Core/Invention)

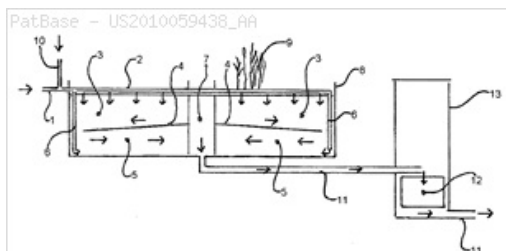
CPC: Y10S210/903 C02F3/32 C02F1/004 C02F3/30 C02F3/301

C02F3/302 C02F3/308 C02F2305/06 Y02A20/156

European: C02F1/00D6 C02F3/30B C02F3/30F C02F3/32 M02F3/30

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US: 210/150 210/170.08 210/605 210/610 210/617 210/630 210/903



Family:

Publication number	Publication date	Application number	Application date
DE502007013391 D1	20141002	DE200750013391T	20071123
EP1925598 A1	20080528	EP20060024475	20061125
EP2102115 A1	20090923	EP20070856236	20071123
EP2102115 B1	20140820	EP20070856236	20071123
US2010059438 AA	20100311	US20070516154	20071123
US8029673 BB	20111004	US20070516154	20071123
WO08061785 A1	20080529	WO2007EP10202	20071123

Priority:

EP20060024475 20061125 EP20070856236 20071123 WO2007EP10202 20071123

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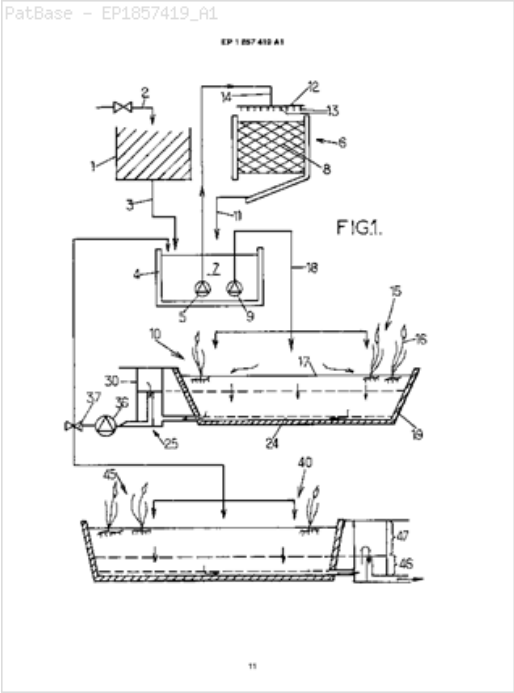
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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY
CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN
IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW
MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ
TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD AND INSTALLATION FOR PROCESSING EFFLUENTS PROCEDE ET INSTALLATION DE TRAITEMENT D'EFFLUEN

Abstract: The treatment of effluents comprises a biological pretreatment of the effluents using bacterial bed, and a biological treatment of nitrification-denitrification of a clarification sludge obtained at an exit of the bacterial bed using vertical-flow reed bed filter. The clarification sludge has a carbon source for nitrification and denitrification. In permanent operating regime, a nitrification-denitrification filter comprises a lower inundated zone and an upper inundated zone. The treatment of effluents comprises a biological pretreatment of the effluents using bacterial bed, and a biological treatment of nitrification-denitrification of a clarification sludge obtained at an exit of the bacterial bed using vertical-flow reed bed filter. The clarification sludge has a carbon source for nitrification and denitrification. In permanent operating regime, a nitrification-denitrification filter comprises a lower inundated zone and an upper inundated zone, on which a biological anaerobic denitrification treatment and a biological aerobic denitrification treatment, are carried out respectively. The height of the inundated zone is greater than or equal to the height of its non-inundated zone. An independent claim is included for a device for waste processing.

Classifications:
International (IPC 8-9): C02F3/30 C02F3/32 (Advanced/Invention); C02F3/30 C02F3/32 (Core/Invention)
CPC: Y02W10/18 C02F3/301 C02F3/302 C02F3/327 C02F2209/42
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Family:

Publication number	Publication date	Application number	Application date
EP1857419 A1	20071121	EP20070107814	20070509
EP1857419 B1	20170524	EP20070107814	20070509
ES2637541 T3	20171013	ES20070107814T	20070509
FR2900921 A1	20071116	FR20060051656	20060509
FR2900921 B1	20101022	FR20060051656	20060509

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