

Title (en)
Sand trap device

Title (de)
Sandfanganlage

Title (fr)
Trappe de sable

Publication
EP 1134323 A3 20030129 (DE)

Application
EP 01106213 A 20010314

Priority
DE 10012379 A 20000314

Abstract (en)
[origin: EP1134323A2] The sand and grit interceptor (detritor) comprises a circular tank (1) with an upward, central internal projection (3) in the base (2). The surrounding annular interception channel so formed, reduces downwardly in cross section. Preferred features: The angle of inclination is selectable but preferably about 40 degrees . An annular sand collection channel (4) is defined; its width is preferably about 30% of the tank radius. Tank depth is preferably at least 40%-50% of the tank diameter. The outer wall is upright. There is at least one scraper (10) operating near the internal base to carry sand to an extraction opening. Basal- (10) and scum- (5, 6) scrapers are turned on the same vertical shaft (8), preferably offset through 180 degrees upon it. The base scraper may be moved radially. The scraper moves the settled sand when turned in one direction; in the other, it conveys it to washing and possible aeration. The scraper lifts sand up a ramp, stirring it up. A vertical plate interceptor is included on another side, causing sand to be transported only along the channel. Aeration is provided near the cylindrical outer wall. A distributed annular aerator is provided. The fat trap (13) includes flotation lamellae. A scum separator provided, includes a scraper plate (6) moving relatively to a hopper (7). It is turned on a vertical shaft (8), the plate extending above and below the level of operation (A). The hopper inlet has a ramp, preferably two. The scum scraper plate can be tilted about an axis (9) running longitudinally through it, being at the same time spring-loaded into one position.

IPC 1-7
E03F 5/14; B01D 21/00

IPC 8 full level
E03F 5/14 (2006.01)

CPC (source: EP)
E03F 5/14 (2013.01)

Citation (search report)
• [XAY] EP 0804955 A1 19971105 - OMS KLAERANLAGEN GMBH [DE]
• [Y] US 5340469 A 19940823 - MONTGOMERY STEPHEN M [US]
• [X] EP 0363049 A1 19900411 - HYDRO INT LTD [GB]
• [X] DE 510060 C 19301015 - KURT STOCK DIPL ING
• [A] FR 2693922 A1 19940128 - TARTING PHILIPPE [FR]
• [A] US 3919090 A 19751111 - SHAFFER ROBERT L
• [A] US 5534163 A 19960709 - MICHEL JOHN H [US]

Cited by
CN114632354A; DE10151498A1; US7438808B2; US11739016B2; WO2020077131A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
DE 20018715 U1 20010125; DE 10012379 A1 20010920; EP 1134323 A2 20010919; EP 1134323 A3 20030129

DOCDB simple family (application)
DE 20018715 U 20001103; DE 10012379 A 20000314; EP 01106213 A 20010314