HUBER TECHNOLOGY
WASTE WATER Solutions

ROTAMAT®
Rotary Drum Screen RoMesh®

– Fine screen, river and sea outfall
– Service water recovery
– Defined separation size
– COD/BOD reduction
– Separation of hairs, fibres, fine suspended material

The situation

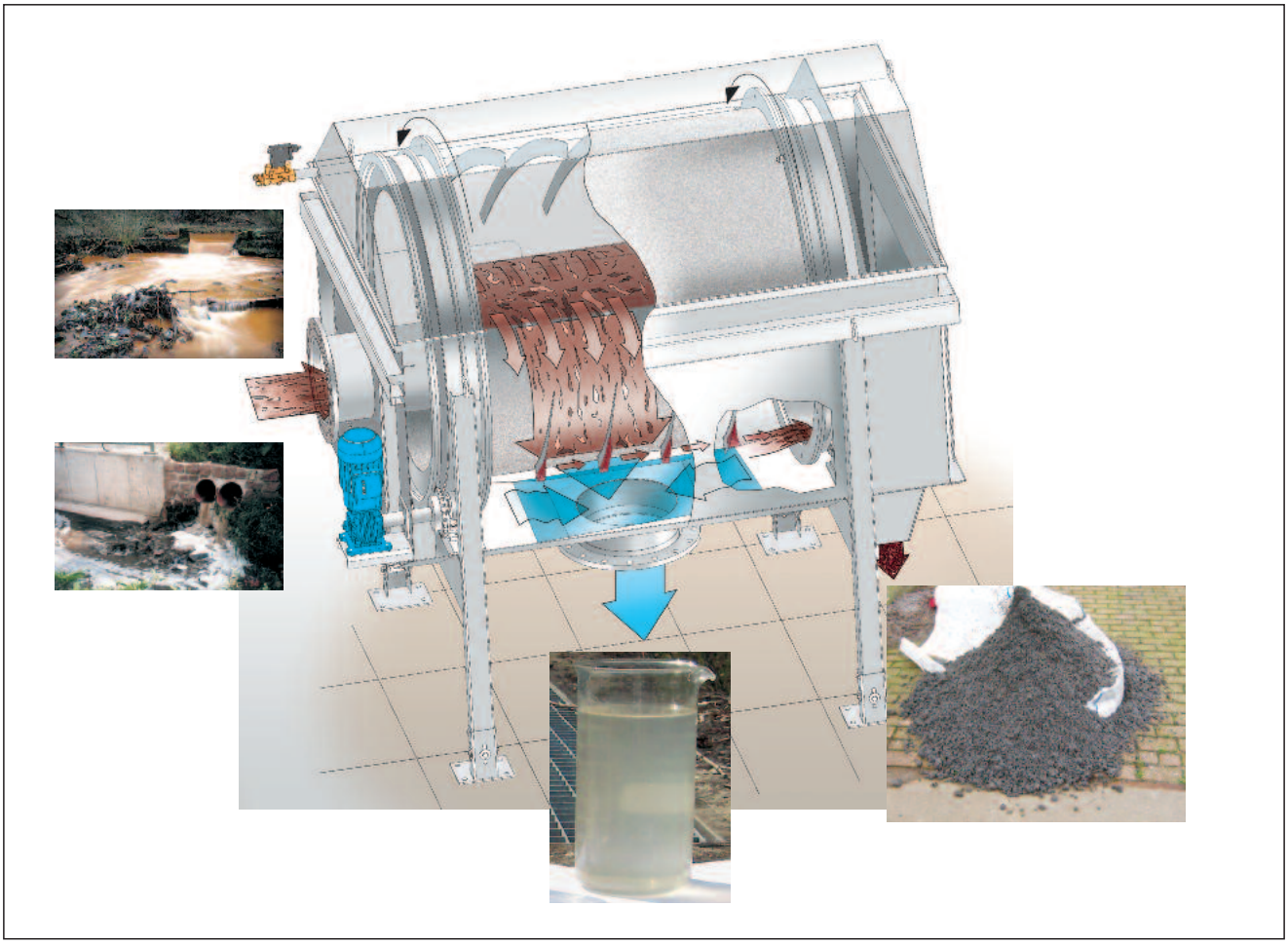
Separation of hairs, fibres and suspended material from municipal and industrial wastewaters is in many applications essential for trouble-free and maintenance-free operation of subsequent treatment stages. Limited financial resources and high separation requirements call for economical and particularly efficient equipment. Fine screening offers the possibility of reliable mechanical removal of high solids concentrations and thus the oxygen-consuming substances.

Our solution

The ROTAMAT® Rotary Drum Screen RoMesh® Screen consists of a horizontal square mesh basket (0.2 - 1 mm mesh) or a perforated plate basket (2 - 3 mm). The wastewater flows from inside to outside the basket through the screen surface. Filtrate is discharged vertically from the bottom of the drum and the screenings are transported horizontally by the rotation of the screen towards the discharge point where they are dewatered further or conveyed to another location. A spray bar with alternately operating spray nozzles cleans the screen surface while the drum rotates. The screened wastewater can be reused as wash water if a sufficiently fine mesh is used.

square mesh [mm]			
0.2	0.5	0.75	1

perforated plate [mm]	
2	3



Schematic drawing of the ROTAMAT® Rotary Drum Screen RoMesh®

Screen sizes and throughputs

The ROTAMAT® Rotary Drum Screen RoMesh® Screen is available in six different sizes. The throughput depends on the mesh or bar spacing and the solids content of the waste/process water to be treated. A throughput of up to 200 l/s per unit is achievable with unscreened municipal wastewater.

Applications

Separation of hairs, fibres and suspended material from municipal and industrial wastewaters

Preliminary separation of fine material is very important for Membrane Bioreactors, amongst other technologies, since such fine material can not only impair the plant's performance, but also cause major operational problems.

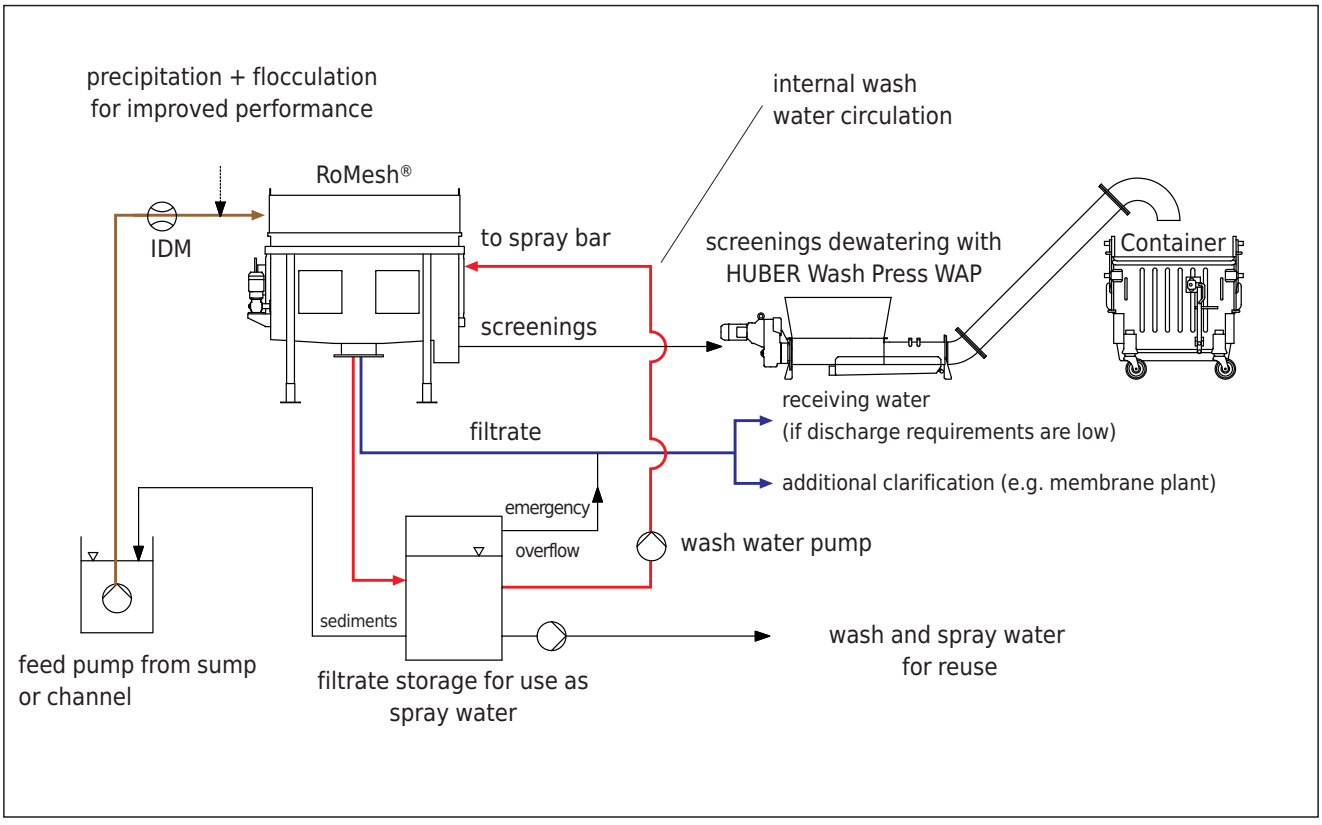
Reduction of COD/BOD_5 in river and sea outfalls

Where river and sea outfalls have only a mechanical treatment stage, it is important to reduce the oxygen-consuming loads in the wastewater to avoid eutrophication of the receiving water. The RoMesh® Screen is able to reduce BOD_5 by 20% and filterable solids (AFS) by 50% and thus can meet the required discharge standard. Even better performance can be achieved with prior precipitation and flocculation.

Recovery of wash water and service water free of hairs and fibres

Separation of hairs and fibres is essential if you want to reuse wastewater as wash water.

The RoMesh® Screen with its square mesh provides a defined separation size and is able to remove such materials.



Flow diagram of mechanical wastewater treatment with a ROTAMAT® Rotary Drum Screen RoMesh®

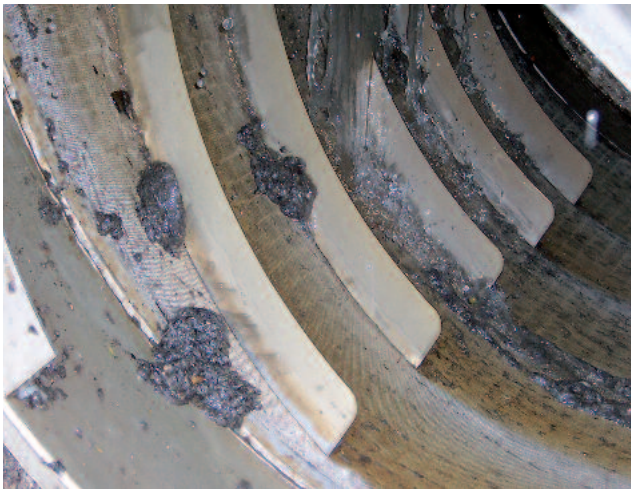
Treatment of industrial process water

Insusceptibility to high loads and screening with mesh sizes from 0.2 mm opens up a variety of industrial application possibilities for the RoMesh® Screen:

- Paper and pulp industry: separation of fine fibres
- Meat processing industry: separation of scraps
- Agricultural industry: separation of fruit and peel residues
- Breweries: mechanical preliminary treatment of all process waters
- Laundries: separation of fibres from wash waters

The benefits of the RoMesh® Screen

- The square mesh provides a defined separation size for safe particle separation
- No lifting of wastewater required due to the low headloss
- Improved effluent quality in river and sea outfall applications, mechanical COD/BOD reduction by up to 30 %
- Protection of downstream treatment stages due to filterable solids (AFS) reduction by up to 60 %
- Continuously high throughput capacity due to automatic periodic high pressure cleaning (120 bar)
- Addition of precipitants and flocculants reduces AFS up to 95%, COD/BOD up to 65%, phosphorus up to 60%.
- Small footprint requirements due to the enclosed, compact design
- No longer down times as the mesh can be replaced on site



Optimal separation of fibres

ROTAMAT® Rotary Drum Screen RoMesh® for optimal separation of very fine particles

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Subject to technical modification
1,5 / 4 – 8.2010 – 8.2004