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HUBER Solutions for Mineral Waste Utilization

GRIT TREATMENT - A COMPLETE SYSTEM

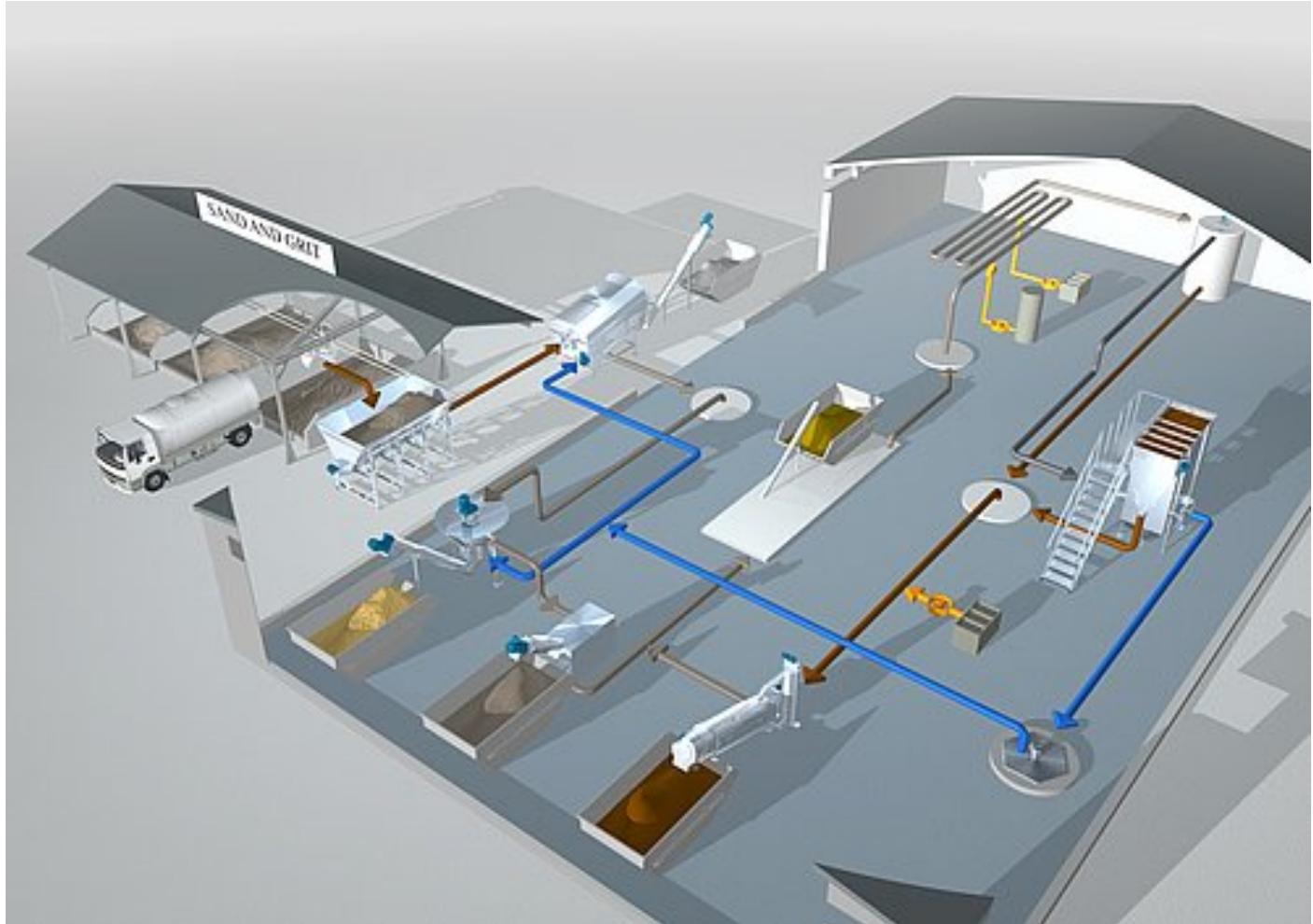
Infrastructure waste (such as road sweepings, gully waste, sewer sludge and grit slurry from grit chambers) contains mineral particles (sand and grit), debris (e.g. packing and wrapping material), other coarse solids (e.g. stones, wood, glass and metals) and organic matter (e.g. leaves and grass).

Our technologies for the treatment of such mineral-rich waste remove debris and other coarse solids. We wash and compact them, so that they can be incinerated as solid waste. The mineral fraction, containing less than 3 % volatiles, is reusable as construction material, e.g. for road and pipe bedding. After composting, the organic fraction can be utilized as soil material, e.g. for landscaping or land reclamation.

HUBER SOLUTIONS INCLUDE THE FOLLOWING PROCESS STEPS:

- Separation, washing, dewatering and compaction of debris
- Waste reception and intermediate storage
- Screening, washing, dewatering and compaction of coarse material
- Suspending of fine material
- Separation, washing and dewatering of the mineral fraction
- Screening, dewatering and compaction of the organic fraction
- Wastewater treatment and process water recycling

[КОНЦЕПЦІЯ](#)



нажмите для увеличения и перехода к интерактивной картинке

ТЕХНОЛОГИЯ

PROCESS DESCRIPTION

Mineral-rich infrastructure waste is directly or indirectly dumped into a [HUBER Receiving or Storage Bunker](#) with an integrated screw conveyor.

The waste is forwarded into our [Wash Drum](#) wherein it is submersed in wash water and homogenized. Coarse solids ($> 10 \text{ mm}$) are screened and washed and then dewatered and compressed in our (optional) [Coarse Solids Compactor](#). Fine solids ($< 10 \text{ mm}$) are suspended in the wash water and drained.

The suspension is pumped to our [Grit Washer](#). In its fluidized bed mineral solids and organic solids are separated. The mineral fraction is simultaneously washed and then dewatered ($< 3\% \text{ volatiles}, < 10\% \text{ water}$). Grit can be screened off and reused as road grit. The washed mineral fraction is used as construction material.

We use a [HUBER Fine Screen](#) to remove organic solids ($> 1 \text{ mm}$) from the suspension. They are simultaneously washed, dewatered and compacted ($> 30 \% \text{ DS}$). The screened wastewater can directly be recycled as wash water to the wash drum. Alternatively, it flows through a [HUBER Grit Chamber](#), wherein even very fine sand ($< 0.2 \text{ mm}$) is removed, is then flocculated and flows through a settling tank and to a [HUBER Dissolved Air Flotation Plant](#) for removal of remaining colloids. The thus treated wastewater is also recycled as wash and spray water to the grit washer and fine screen. The separated sludge is dewatered in our [Screw Press](#) ($> 50 \% \text{ DS}$).

If the treatment plant is located at a wastewater treatment plant, the organic suspension is simply added to the incoming wastewater for common treatment. In this case, neither a fine screen nor a grit chamber, flotation plant or screw press is needed.

When we implement our solutions, we also provide our well-proven HUBER stainless steel components, e.g. [Screw Conveyors](#), [Manhole Covers](#) and Stairways, Platforms and Guardrails.

ПРИМЕРЫ ИЗ ПРАКТИКИ

- [HUBER Screw Press Q-PRESS® in operation at a disposal company](#)
- [HUBER Grit Treatment System RoSF5 in the waste management industry](#)
- [Heavy-medium separation and washing system installed and commissioned at BEZ Hochfranken](#)

- New plant in Switzerland for innovative sewer grit treatment with process water recycling
- Ideal synergies of ecology and economy: smart HUBER solutions for grit processing in the waste management industry

[PDF скачать](#)

[проспект: Grit Treatment - A Complete System \(по-английски\)](#) [pdf, 1.67 MB]

Photos



Video: HUBER Grit Treatment Systems

<https://www.youtube.com/watch?v=nNstEvZA-24>

Animation: HUBER Grit Treatment System RoSF 5

<https://www.youtube.com/watch?v=MGrAG0bs4xQ>

Обладнання

- HUBER Обертова барабанна решітка ROTAMAT® Ro2 / RPPS / STAR
- HUBER Горизонтальний піскоуловлювач ROTAMAT® Ro6
- HUBER Комплексні системи обробки піску RoSF 5
- HUBER Coanda Класифікатор-мийка піску RoSF4
- Приймальні бункери
- HUBER Фільтраційний перфорований барабан RoSF9
- HUBER Шнековий прес S-PRESS®

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