DRYCAKE

Vanderbeken Enterprises Ltd.

SEDITANK: Grit Removal Solutions For a Better World.

DOC#SEDITANK-PRES-001
Rev. V11607R04

DRYCAKE

Vanderbeken Enterprises Ltd.

Develop

- Process solutions partnerships to find efficiencies on new or existing process.

Design

- Machines for solids recovery, liquid clarification, and minimize water consumption.

Deliver

- Project specific solutions for better economic, and environmental process performance.

www.drycake.com | info@drycake.com

DRYCAKE

Vanderbeken Enterprises Ltd.

DRYCAKE is an engineered products and services company Focused on Process Equipment and Design for Volume Reduction and Water Recovery for municipal and industrial wastewater.

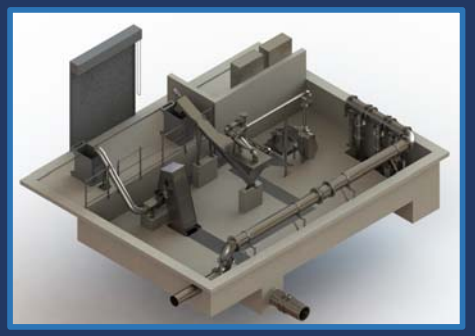
For over 20 years , our clients trust us to deliver process packages designed to meet their needs. We consider, foresee and respond to project needs and design, develop and deliver cost-effective and practical solutions. We are committed beyond product guarantees to process responsibility.

DRYCAKE engineers, packages, delivers, installs, commissions and supports Inlet Works Screening and Grit Removal systems, Decanter and Disc-Stack centrifugal mechanical separation packages, solid waste systems thermal drying and evaporation technology, and conveyor systems.

www.drycake.com | info@drycake.com

ENGINEERING AND DESIGN

Thanks to our professional R&D team, our range is always in evolving and constantly improving, and it represent today, the best choice in terms of quality and reliability, with the best performance.



Part of our commitment to excellence is that we develop a 3D plant render of each installation showing the equipment installed.

DRYCAKE's technical department is able to develop all the required design activities from feasibility to as-built. Process Validation can be validated using our lab or on-site pilot services.

All the project phases are carried out by means of professional instruments.
Quality control during the entire design process guarantees the compliance with Customer's technical requirements and good manufacturing practices.
DRYCAKE plants are managed by PLC and equipped with all the necessary instruments to check continuously the main process parameters (temperatures, pressures, flow rates, etc.).

DRYCAKE
Vanderbeken Enterprises Ltd.

MANUFACTURING

With over 20 years of experience and hundreds of satisfied clients all over the world, DRYCAKE continues to provide with his specialized tailor-made wastewater conveying, filtration, sedimentation, centrifugation, and drying equipment

Quality checks are carried out during the whole manufacturing process in order to assure the compliance with UL and CSA, ASMI, ANSI Standards and certifications.

DRYCAKE
Vanderbeken Enterprises Ltd.

PRODUCTION METHOD

The performance of our machines is ensured by quality components and by our highly professional production team.
Our equipment is manufactured in high quality Stainless Steel , and is fully customizable according to project requirements and needs. Our Centrifuge rotating assemblies are centrifugally cast.

The production team is composed by assemblers and certified welders, experts in TIG (Tungsten Inert Gas) welding, a process of arc welding with consumable electrode (tungsten), under protection of inert gas.
Especially useful for welding thin materials, this method is characterized by a stable arc and high quality welds, but it requires significant operator skill and can only be accomplished at relatively low speed. After the welding processes, the Stainless Steel is passivated by our operators.

All equipment is subject to 3rd party witnessed factory acceptance test prior to shipment.

DRYCAKE
Vanderbeken Enterprises Ltd.

INSTALLATION, COMMISSIONING AND START-UP

DRYCAKE can provide complete site services

- Supervise installation.
- Operator training
- Maintenance training

Thanks to its experience and to the implementation of project control techniques DRYCAKE is able to deliver to the Client plants on time and on cost.

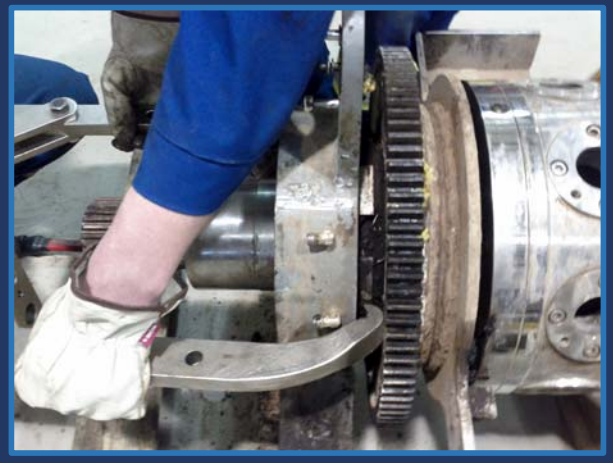
DRYCAKE
Vanderbeken Enterprises Ltd.

OPERATION AND MAINTENANCE

At the end of plant commissioning and start-up, DRYCAKE can assist the Customer with tailor-made services according to the Client request:

- Supervision contract
- Maintenance contract

DRYCAKE service centres cover North America



DRYCAKE

Vanderbeken Enterprises Ltd.

Markets

- ✓Municipal
- ✓Mining
- ✓Food and Beverage
- ✓Chemical
- ✓Oil & Gas
- ✓Pulp & Paper
- ✓Industrial Processes
- ✓System Integrators
- ✓Biomass gasification

DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

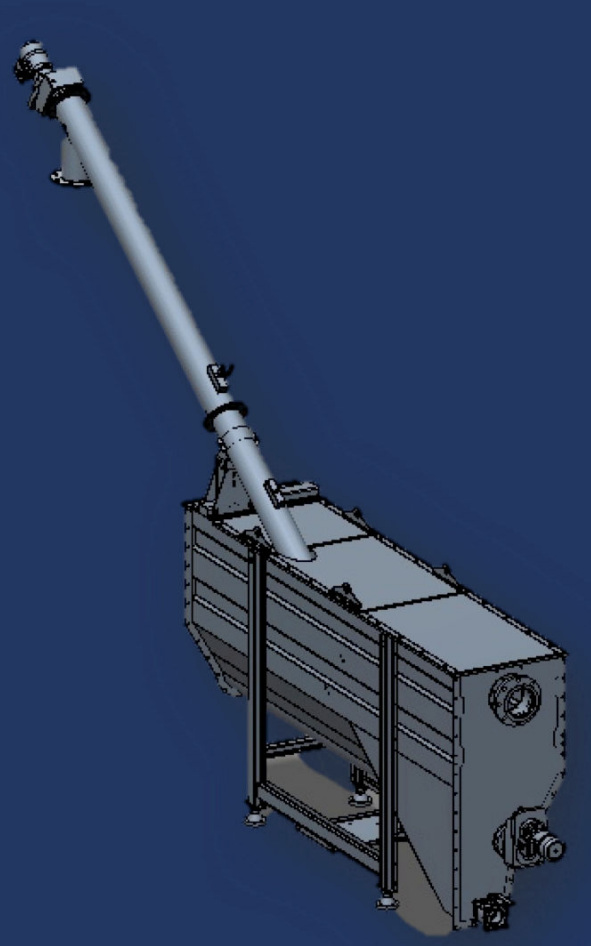
To prevent downtime due to Digester Grit Cleaning

The DRYCAKE SEDITANK is continuous system designed to remove grit from organics prior to introduction into the digester.

At the inlet of the organics stream after an organics separator.

The SEDITANK takes the organics stream after an organics separator and uses diffuses air in countercurrent to induce an high efficiency settling.

A Horizontal accumulates the grit for for removal by an inclined extraction conveyor



DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

Design Configuration

- ✓ The SEDITANK is configurable as a grit separation and floatings removal, all within a single packaged unit
- ✓ The effluent then discharges to a hopper section where grit settling is induced.
- ✓ The grit is conveyed to a grit classifier and can be further washed prior to dewatering and disposal into a bin or a bagging system.

DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

Benefits

- ✓ Excellent grit capture rate
- ✓ High reliability and long life
- ✓ Reduced construction cost
- ✓ Low maintenance required
- ✓ Compact unit with small footprint
- ✓ Quick and easy to install
- ✓ Possibility to customize plant
- ✓ Configurable as a complete headworks unit.
- ✓ No odor nuisance

EFFICIENCY

- ✓ **WASHING EFFICIENCY OF THE ORGANIC MATTER** ≥90%
- ✓ **EFFICIENCY OF THE GRIT REMOVAL** ≥95%
- ✓ **REDUCTION OF THE FLOATING MATTER** ≥97%
- ✓ **GRIT DRYNESS EFFICIENCY** 90% of dry material
- ✓

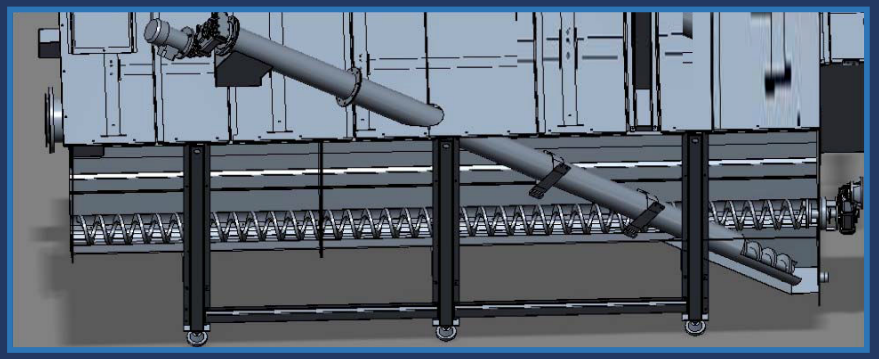
DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

Sedimentation Principle

Grit capture rate of 95 % with 75 mesh grit (200 micron particle diameter).

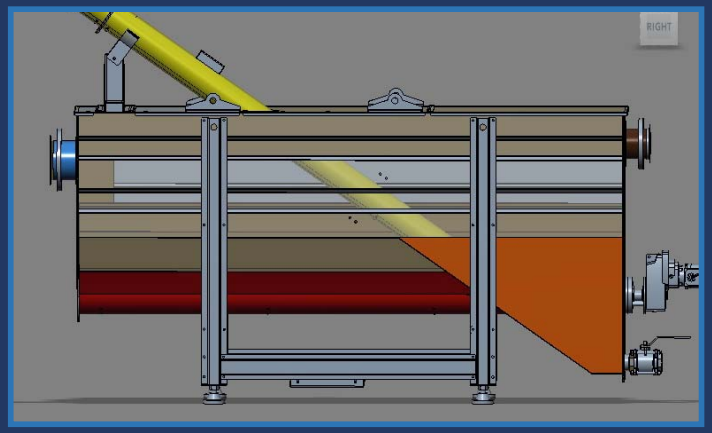
- ✓ The settled grit is removed from the bottom of the grit channel with a horizontal grit screw.
- ✓ An inclined shafted screw then conveys and dewaters the collected grit.
- ✓ The grit discharges down a chute into a grit bin.



SCREWS

Horizontal bottom screw ⇨ SHAFTLESS

Extracting screw (inclined) ⇨ SHAFTED



- Inlet: Brown
- Outlet: Blue
- Horizontal Screw: Red
- Grit Collection hopper: Orange
- Grit Extraction Screw: Yellow

DRYCAKE
Vanderbeken Enterprises Ltd.

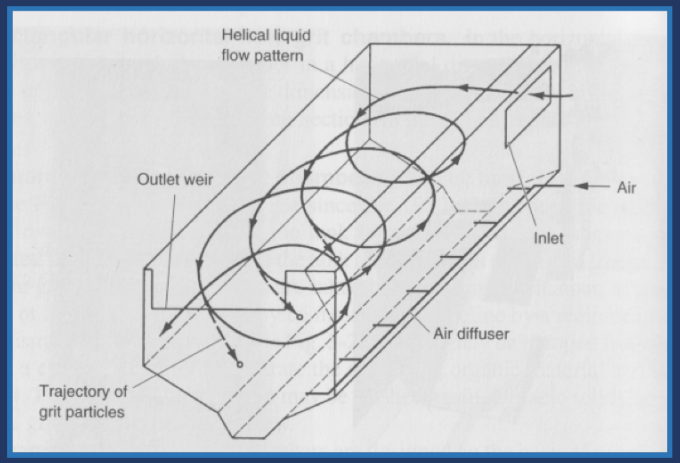
SEDITANK SYSTEM

Air Diffusers

Low Pressure Air diffusers are installed to improve separation efficiency for higher viscosity, high organic matter sludge. For thinner sludge, it is not normally required.

The diffusion has very little impact on odor. From the surface it is very difficult to see any diffusion is occurring.

- ✓ Pressure: 0.3-0.5BAR (4-7PSI)
- ✓ Frequency: 20-30 seconds every 20-30 minuts.



Source: Crites and Tchobanoglous, 1998.

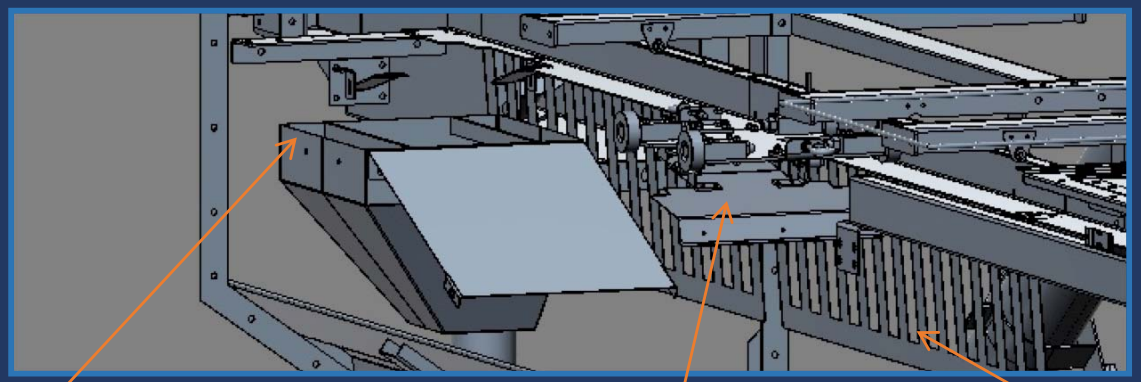
DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

FLOATINGS REMOVAL SYSTEM

- ✓ Floatings are collected in a collection trap that is connected with the parallel grit channel through slots in a separating wall.
- ✓ Floatings are skimmed off the water surface with a paddle scraper that is slowly pulled by a stainless steel rope. The paddle shape guarantees the removal virtually all floating matter.

- ✓ The skim layer is pushed over a weir into a hopper and then pumped for further treatment.



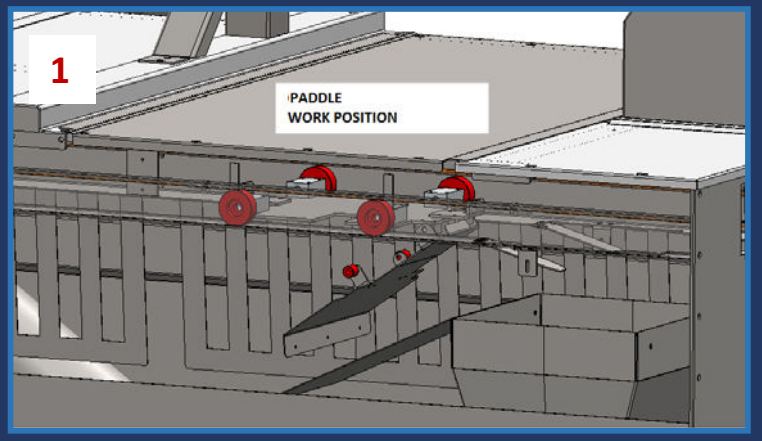

Floatings

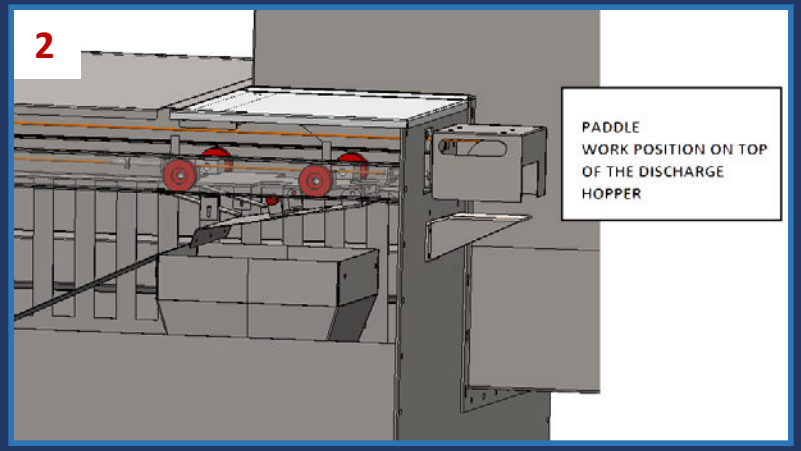
DRYCAKE
Vanderbeken Enterprises Ltd.

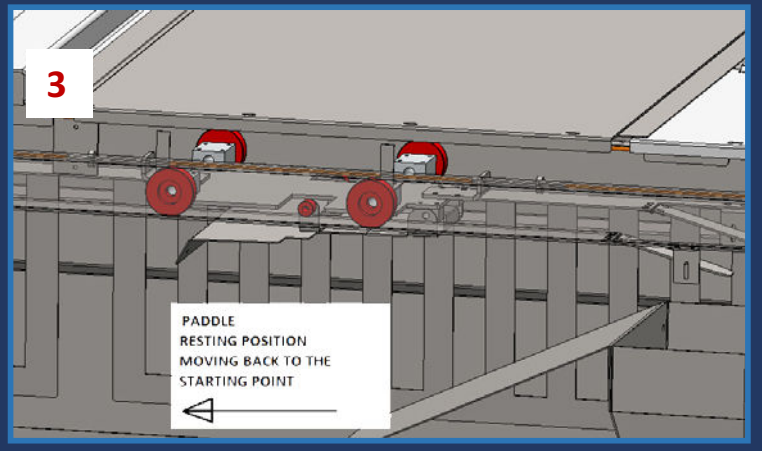
SEDITANK SYSTEM

FLOATINGS REMOVAL SCRAPER


FLOATINGS REMOVING PADDLE







DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

FLOATINGS REMOVAL SCRAPER

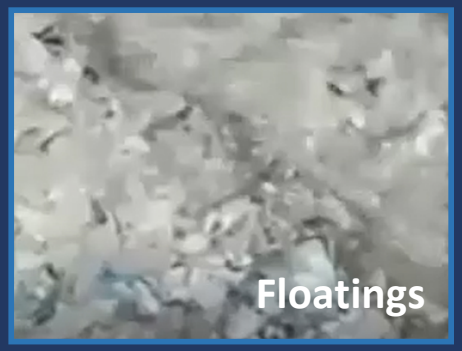
Rake scraper mechanism

Floatings collection system

DRYCAKE
Vanderbeken Enterprises Ltd.

SEDITANK SYSTEM

INSTALLATION



DRYCAKE

Vanderbeken Enterprises Ltd.

www.drycake.com
sales@drycake.com
1877-DRYCAKE