CLEANING RESERVOIRS AND STREAMS

CLEANING OF RESERVOIRS, LAKES AND RIVERS
Sedimentation of particles in reservoirs, lakes and rivers reduces their volume and capacity to store water. Due to the turbidity of the water, extensive environmental problems can occur such as bad odors, well water pollution, etc.

Admir Environment provides an environmentally friendly technology designed especially for the cleaning of reservoirs, lakes and rivers, by pumping and separating the sediments from the water.

PUMPING
Admir Environment provides cleaning the bottom of the reservoirs, lakes and rivers using dredging equipment without draining or interrupting the natural flow of the water.

Modern pumping equipment that includes various types of controllers and sensors allows controlled pumping of the bottom of reservoirs or rivers with full control of the depth and capacity of the pumping.

Dredger benefits:
- Pumping of sludge from the bottom of reservoirs without causing damage to the lining.
- Pumping and cleaning of reservoirs and rivers without interrupting the ongoing operations.
- The controller and sensors provide precise control on the capacity, layer height and percent solids being pumped.
- Pumping of the sediment sludge without stirring or mixing it with water.

DEWATERING SLUDGE OF RESERVOIRS AND STREAMS

There are several solutions available for handling sludge and sedimentation on the bottom of reservoirs or streams.

GEOTUBE® is the preferred solution for the fast and efficient dewatering of sludge and sediments being pumped at a high capacity.

The sludge pumped by the dredger flows through piping into GEOTUBE® which is installed in the spill containment pallet. The solids are trapped within geo-textile containers while the filtrate free of solids (removal of about 99% solids)filtrates out. The filtrate flows back to the source. The solids inside the GEOTUBE® after drying is either covered or removed from the field.

The advantages:
- Quick pollutant removal capability.
- Establishment of systems where there is no infrastructure such as electricity.
- Return of high-quality water to the source (in reservoirs).
- Cost-effective solutions comparing with other technologies.

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DEWATERING OF INDUSTRIAL WASTE

The Industrial production processes produce different kinds of sludge. Admir environment deals with sludge using the following technologies.

TREATMENT OF SLUDGE BY GEOTUBE®

Dewatering of industrial sludge by using the GEOTUBE® technology is very efficient. This method can reach a high percentage of solids (30%-80%) in a short period of time while pumping and dewatering large amounts of sludge.

The GEOTUBE® Technology includes adding and mixing polymers to the sludge during the pumping processes to induce flocculation, which enables filtering through the geotextile. The consolidation is achieved by reducing the initial weight of the sludge by squeezing the liquid out, while the solids remain trapped within the GEOTUBE®.

VacuDry - Multi sludge heating treatment

At the core of the VacuDry process is a specially designed dryer chamber which uses heat and controlled vacuum to evaporate volatile contaminants. The batch-wise working indirectly heated thermal desorption process treats solids contaminated with mercury, hydrocarbons, solvents and other hazardous substances at temperatures above their boiling points.

The treated, dried solid residues - usually 99% pure minerals - are cooled and remoistened. An additional small mixer is used for later re-moistening or solidification where required. Various feeding systems are available, depending on the consistency and type of the input materials - varying from liquid sludge up to soils/debris of all types of contamination levels.

SLUDGE DEWATERING AT MUNICIPAL WASTEWATER TREATMENT FACILITIES

In recent years there has been an increase in wastewater treatment facilities using a diverse range of technologies for the recycling of wastewater. During the treatment process sludge of relatively low solids concentration is produced which requires further dewatering in order to continue treatment or disposal.

Admir Environment dewaters sludge produced in municipal wastewater treatment facilities by application of GEOTUBE® technology.

Geosynthetic containers with the ability to induce and effectively filter rate, manufactured from a high tensile Polypropylene geo-textile.

Dewatering is accomplished in three (3) stages:

1. Pumping and mixing of the sludge with polymers to induce flocculation.
2. Separating the clean water from the solids (solid removal of over 99%), solids remain trapped inside the containers.
3. Allowing additional time for drying and consolidation reduces the volume of the solids.

Dewatering by GEOTUBE® is especially effective in the following wastewater applications:

- Dewatering sedimentation ponds.
- Dewatering effluent sludges which require a large amount of sludge to be dewatered fast. The GEOTUBE® system allows quick dewatering of the reservoirs, organic digesters, etc.
- Emergency backup solution for other dewatering equipment.

Admir Environment - A part of Admir Technologies Group, designs and implements projects in the field of Environmental Engineering. The experience and knowledge in the field of environmental engineering technologies enable Admir Environment to offer cost effective solutions in a wide range of applications.

Admir Environment provides a variety of applications for Ecological Solutions:

- Municipal wastewater treatment plants - dewatering organic sludge.
- Industrial wastewater - dewatering and treatment of organic and inorganic sludge.
- Cleaning and rehabilitation of waterways and rivers.
- Oil sludge - dewatering and treatment.

Admir Environment offers a variety of technologies:

- GEOTUBE® - Dewatering geo textile container.
- DREDGER - Dredging machines for cleaning and rehabilitation of waterways and rivers.
- VacuDry - Thermal treatment for separate liquids from toxic sludge including solidification process of needed.
- Equipment for pumping and sludge treatment.

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