ALLIED Industrial Dynamics

CASE STUDY

Municipal Water Treatment- Effluent Separation

At A Glance

Challenges

- Increased frequencies in vacuum Truck services
- Costs of slurry disposal

Benefits

- Lower operating costs by eliminating the need for Vac Truck services
- Decreased carbon footprint with reduced transport
- Landfill solids
- Divert drinking water from disposal

Project Story

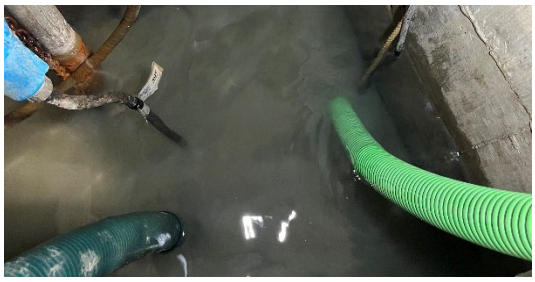
A municipal water treatment plant faced a critical challenge: efficiently separating and drying effluent sludge while minimizing environmental and operational costs. The traditional method of using vacuum trucks to remove and dispose of sludge had become uneconomical as the city's population grew, leading to more frequent sludge removal needs and escalating costs. Recognizing the unsustainability of this approach, the treatment plant partnered with Allied to pilot a more efficient and cost-effective solution.

Approach

To address the challenge, Allied set up its DX200 centrifuge at the client's facility as part of a full-scale pilot project. The system was configured to lift sludge directly from the pit using a PC pump, ensuring a steady and controlled feed into the centrifuge. To enhance the separation process, a precise amount of polymer (poly) was introduced into the mixture, facilitating improved dewatering efficiency. This setup allowed Allied to demonstrate the capabilities of the DX Series Centrifuge in real-time operating conditions, delivering insights into its performance and scalability

Results

The results proved that an Allied centrifuge package could effectively thicken and separate the slurry, divert drinking water, eliminating the need for vacuum trucks, and enabling the solids to be efficiently disposed of in landfills at a lower cost.



Solution for municipal waste streams

For a commercial-scale project, Allied recommends the DX Series Centrifuge, designed specifically to handle the challenging slurries common in the water industry. With bowl diameters of up to 30 inches and user-friendly controls, these machines deliver reliable performance and streamlined operation for optimal efficiency

Allied Centrifuge Technologies DX200 (10”) as shown

Allied Industrial Dynamics is a processing solutions company. Helping businesses tackle unique slurry processing applications. Providing high quality manufactured separation equipment and rotating equipment.

For more information about Allied Industrial Dynamics, visit www.alliedindyn.com, or email sales@alliedindyn.com

ALLIED Centrifuge Technologies

DX SERIES

Unit	Feed Capacity	Phase	Empty Decanter Weight	Beach Angle	Total Installed Power	Bowl Diameter
DX100	0.5-2 M3/h (2.2-8.8 gpm)	2	318 kg (700 bs)	20°|15°|10°|8°	7hp	152 mm (6”)
DX200	1-10 M3/h (3-44 gpm)	2	900 kg (1984 lbs)	20°|15°|10°|8°	15hp	254 mm (10”)
DX300	5-14 M3/h (20-60 gpm)	2	1752 kg (3800 lbs)	20°|15°|10°|8°	40hp	356 mm (14”)
DX400	17-30 M3/h (75-125 gpm)	2	4200 kg (9259 lbs)	20°|15°|10°|8°	65hp	457 mm (18”)
DX500	35-55 M3/h (154-242 gpm)	2	6500 kg (14330 lbs)	20°|15°|10°|8°	120hp	559 mm (22”)
DX600	45-90 M3/h (200-400 gpm)	2	9700 kg (21385 lbs)	20°|15°|10°|8°	150hp	660 mm (26”)
DX700	68-159 M3/h (300-700 gpm)	2	15800 kg (34833 lbs)	20°|15°|10°|8°	200hp	762 mm (30”)