



RUSSELL FINEX

Global Sieving & Filtration specialists

A water treatment plant reduces costs of removing algae with a new process

Russell Finex supply Liquid Solid Separators to help remove algae at a water treatment plant

With spring and summer giving rise to the formation of algal blooms, it is necessary for treatment plants to remove all the algae from the water before it is further treated.

One common water treatment process is to pump raw water into two large continuously revolving micro strainers, which trap the algae on a drum covered with fine mesh. Whilst the clean water is then processed through coarse sand filters where any remaining algae is removed, the self-cleaning system in the micro strainers washes the algae off the mesh.

Following a consultation with a Russell Finex sales representative, it was determined that the **Liquid Solid Separator™** was the most appropriate machine for the application. Being the ideal machine to deal with the removal of soft and fibrous oversized solids, an on-site trial was provided to assure this was the right machine for them. The chosen solution was to remove the algae from the backwash water before being stored in the settlement lagoon.

Screening at 100 micron, the Liquid Solid Separators are put into action when algae levels in the backwash water are above 40,000 cells per milliliter. In order to ensure there is no algae break up in the water, the Liquid Solid Separators are tilted at an angle to ensure the correct dryness of algae as it is discharged from the Liquid Solid Separator™ into the waste collection bin.

With its unique screening action, the Liquid Solid Separator™ keeps the filtration mesh clear of oversize particles, thereby maximizing liquid flow. As a key requirement was for the system to be self-cleaning, spray bars were also installed to back wash the mesh in situ to further ensure the mesh is kept clear at all times. The mesh does not need to be manually cleaned and can therefore run without operator involvement.

With recent climate changes being a threat to the sustainability of water services, it is even more imperative that the backwash water is reclaimed. The separators



Figure 1. The Liquid Solid Separators installed at water treatment plant

- Saves costs of dredging the lagoon due to algae build up
- Small footprint ensures simple installation
- Adjustable elevation allows for optimum product dryness

prevent the water quality in the lagoons from deteriorating. This in turn also enables substantial cost savings eliminating the need to remove sludge from the lagoon.

Russell Finex has over 75 years of experience manufacturing and supplying separators, screeners and filters to enhance productivity and ensure product quality. The company serves a variety of industries in over 140 countries with applications that include adhesives, ceramics, chemicals, colors, enamels, explosives, food, inks, latex, metal powders, paint, paper coatings, pharmaceuticals, plastisols, powder coating, and waste oils.

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