

Decompression-dehydration-drying device

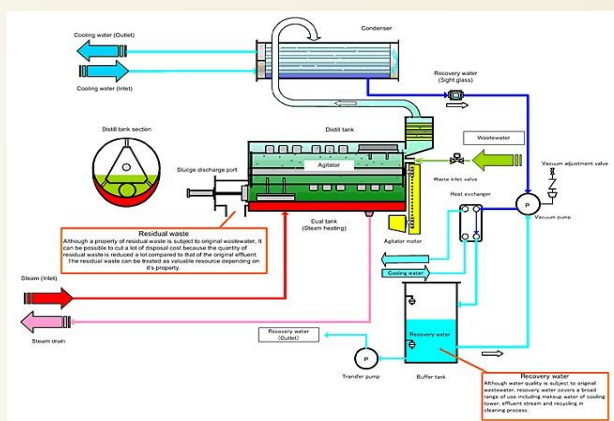
This device can separate water from the concentrated waste water and high water content sludge by vacuum distillation method. It contributes to the re-use of industrial waste and wastewater volume reduction.

Features

- To achieve a reduction of waste through distillation and dehydration of general wastewater or sludge under the decompressed state.
- In addition of waste water, it is also possible to distill and re-use the high boiling-point solvent.
- Can design the device according to customers' waste amount. ※The device line-up is from Gen 25 –Gen 1000.
- To treat the waste water by Gen-500, the industrial waste could be reduced 850t/ per year.



Take-Gen300 type



Overview (Technical principles, actions, etc.)

As we all know, if water is heated in a high mountain, it boils at lower temperature than on the ground because the air is thin in high mountains.

Boiling point of water drops because the pressure is low in high mountains. In the same way, if decompressing air in a container, water boil at about 50° C. We apply this universal principle to decompression-dehydration-drying device.

It costs a lot in usual waste water treatment and requires a lot of space and complicated facilities. Most of wastewater and a concentrated liquid are disposed as industrial waste. Most sludge is treated by a dehydrator and made into status of a cake.

Dehydration methods like filter press, screw press, centrifugal dehydrator have their limits, moisture content of sludge is about 60%. In the case of old facilities, the moisture content may increase to 70% to 80%.

This device doesn't emit toxic gas, because a extracted liquid from raw water is condensed and liquefied in the condenser.

The social environment has been becoming more difficult, people are now focusing on ISO,PRTR system, ecology, zero-emission worldwide. We think that reducing industrial waste and preserving global environment are our mission.

Introductory Track Record

Delivery destination	Country	Applications	Processing amount	Unit
M Firm	Singapore	Re-use and recycle of solvent	25L/h	1set
S Firm	Pillipine	Concentrated liquid waste disposal	300L/h	1set
N Firm	Philippines	Washing wastewater	100L/h	1set
N Firm	Taiwan	Washing wastewater	150L/h	1set
U Firm	Korea	Re-use of the silicon wafer processing effluent	600L/h	1set
T Firm	Thailand	Concentrated liquid waste disposal	500L/h	1set
P Firm	Singapore	Roof development waste disposal	30L/h	1set
S Firm	Thailand	Soluble cutting oil	150L/h	1set

The introductory track record above is all for Southeast Asia.

The current delivery record in Japan is now(March, 2013) about 200 sets.

Effects

Currently, wastewater with high moisture content is discharged under the law after chemical treatment and activated sludge treatment. In general, residual waste is treated by a filter press and discharged as industrial waste with moisture content 60-80%. GEN reduces moisture content of residual waste to several % by a decompression-distillation system.

Two-method automatic operation mode (Batch / Succession)

The only moving part is the pump drive
Highly maintenance free automatic operation.

Reduction of industrial waste and low cost performance.

Moisture content is adjustable (1-5%) during the batch operation.
There is a great recycling potential for the waste fluid.

Designed to mitigate odor and noise.

The closed system eliminates odors.
The only source of noise is the pump.

Treatment of mixed fluids(organic/inorganic)

The device can treat mixed fluids which contains waste acid and alkaline wastewater through its neutralizing effect.

Space saving

The tank is equipped with a large heat transfer area and allowing it to operate at low temperature providing for greater space efficiency.

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