



SUMMARY THE UNIVAT SYSTEM

Water and Waste Treatment System

Patent Protocol
(PCT/AU2017/000012)

Overview

The need for clean water is fast becoming one of the world's biggest issues. Couple that with the fact that ALL industry creates a waste stream, and many of these streams are left to sit in ever increasing ponds, dams and man-made lakes, and store not only the waste but until now, unrecoverable water. The UNIVAT SYSTEM enables the immediate separation (by way of 100% natural flocculant) to almost ALL of these streams regardless, then (by an intertwined 100% natural coagulant) pressing the now clear water out, leaving a dry form of the waste, which is then packaged for handling as part of the same process.

Description

There are several components that make up the 'Univat System'.

1. The Univat
2. The Agent
3. The Process

The UNIVAT

Is a newly conceived machine, as the name suggests ONE VAT or tank. The unique design ability enables a more effective, efficient and less cumbersome way to treat foul water, effluents, and a huge array of Industrial waste streams ranging from Red Muds, coals, sewage, ceramics, asbestos and so forth.

Why more efficient? The world best practise currently is to have several (5-7) machines in a process cycle, along with pumps, telemetry, and a host of maintenance 'glitches' that these nuances bring together. The UNIVAT completes these tasks in one vat, using gravity very cleverly (no pumps internally at all to transfer products and separation).

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-----" little steps....BIG impressions" -----

1. Receives the raw waste from stored pond via a pump.
2. Introducing the propriety AGENT
3. Transfers THAT balanced quantity into a lower chamber for process (and starts to refill the next batch)
4. The process chamber agitates for a minute or less, converting the waste via a unique 'ionisation' into a separated entity, leaving totally clear water.
5. A press is activated, to squeeze the waste stream into briquettes whilst the water is now cleared to enter another chamber (no pumps)
6. Once the waste stream is pressed, it is then ushered into yet another inner chamber, direct into a bulka-bag...or in bigger models, a chute for conveyor, trucks or bins.

The UNIVAT cleverly and effortlessly performs what is currently many interfaced separable machines.

The AGENT

A mixture of 5 x 100% natural elements whereby a miniscule amount to be agitated at speed for less than a minute in the waste stream mix, where an ionic action enables all particulates to become HYDROPHOBIC (an aversion to water). This allows separation, and the coagulant allows pressing to become a hard and solid handle-able item.

The results are that almost all traces of elements, BOD's, COD's, TDS, heavy metals, arsenic, etc are separated from the water, leaving it as clear as tap water with always a PH between 6.0- 6.5 at the end, soft water.

The PROCESS

There are some necessary protocols that inherently are propriety domain, hence the Patent.

The waste stream enters the top chamber, works its way through varying procedures and comes out in two parts,

1. Clear Water
2. Compacted DRY (Briquettes)or powdered dry product (dependent on clients preference)

Notable Advantages

- a. Computerised validations, checking and control with remote (mobile App) access.
- b. Cameras for viewing internal processing

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- c. Skid mounted and stand- alone power supply (No client involvement needed)
- d. 24 Volt powered throughout with solar panels charging (small generator for standby if necessary)
- e. Waste Stream automatically already bagged for shipping or other control
- f. Approximate 20 CuM per Hour of liquidised waste converted in Model CFSU07.
- g. All Stainless Steel construction of all parts, to accommodate harsh environments and products.

Uses and viability

What to do with waste stream now they are dry. Worst case is that Shire Councils will accept them (they do not accept sludge's of any kind any more).

Many waste streams are able to be value-added and many are able to be sold back to the 'owner' (IE Coal fines in ponds can be retrieved as a high-end product, much sought after...but no system until now, so they dump it).

Fertilisers, blending , mixing with other streams to create (IE, Fly Ash and Red Mud will make a very hard wearing, very high heat resistant product, good for kilns, wear surfaces, transfer chutes, heat tiles, road bases).

Almost ALL industrial, commercial and domestic wastes can be treated. Some 40 different genres of industry have been identified with an unbelievable success rate.

Patents

A total of 38 claims embodying the 'system' complete have been filed under Patent Protocol in over fifteen countries and regions.

The Patent Cooperation Treaty (PCT) was recently engaged to perform an International Search, findings were;

1. NOVELTY all 38 claims
2. INVENTIVE all 38 claims
3. COMMERCIAL VIABILITY...All

For more information, please feel free to discuss any details on the above numbers and address.

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