

Herman Harkink: “Companies lite from the CO₂, Nitrogen neutral so



MUNICIPAL WASTE



BIO-WASTE



PLASTICS



MEDICAL WASTE



RUBBER



E-WASTE



PET



PAPER



BUTYL

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Herman Harkink has been working in the energy sector for 17 years and for 7 years on innovative systems to solve the waste problem sustainably. He goes for water-, CO₂, Nitrogen and energy-neutral life. What he uses he wants to produce. His goal is to share his experience and knowledge of energy waste, LED lighting, wind- and solar technology and other energy-saving techniques with others.

Herman J. Harkink

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JHT FOTOGRAFIE

You helped develop the WASTEGONE, a huge Eco decomposition system?

Herman: “Correct. I have been involved in the development of this concept for 3 years now. The WASTEGONE reduces the mass by up to 300%. He turns 300 tons of waste into 1 ton of waste. During that process, the system produces electricity. So companies literally get a lot of energy from the CO₂, Nitrogen neutral solution of their waste problem and you can also get an extra subsidy, SDE++ and more.”

So your mission is to reduce company emissions to 0?

Herman: “Indeed. We use the latest magnet technology. To get more temperature we add air. This allows you to control processes. For e-waste, for example, you need a temperature below 1000°C. This produces PlasticOil (also precious metals), the basic product for making plastic circular. You can then make petrol, diesel or

rally get a lot of energy olution of their waste problem”

other oil-related products from this. The electricity you produce during the process is stored in batteries, which you connect between the generator and the grid. You can sell that electricity on the futures market. This is best done at peak times. For example, a lot of power is consumed during breakfast, lunch and dinner. But also in the middle of winter or summer, when rooms are heated or cooled, are good times to supply electricity. You can make agreements about this with TenneT.”

How much electricity does the WASTEGONE generate?

Herman: “100 tons of plastics yield 45,000 litres of PlasticOil. You can generate 28 megawatts of this, or 28,000 kilowatts, of electricity. With this, you can supply 10 families with electricity for a year.”

It is a system measuring 21 by 15.5 by 7.5 meters. What can this system do?

Herman: “With the WASTEGONE you can process 100 tons of mass per day and make it disappear. I always say, ‘Put it in the WASTEGONE and the WASTE is GONE.’”

“Put it in the
WASTEGONE
and the
WASTE
is GONE.”

What kind of investment is involved with this system?

Herman: “Rounded off, you pay 6 million for a system that processes 100 tons of waste per day.”

“The WASTEGONE
reduces the
waste mass
by up to 300%
and produces
green electricity
and hot water
at the same time”



Are you getting that investment out of it? And if so, in what timespan?

Herman: "Within five years you will get the investment, including the organizational costs. Envision a hospital with 600 beds. That has

"After 5 years you will have 3 tons left over to invest in your hospital"

3 to 3½ tons of cost per year. For that hospital, you would need a WASTEGONE of about 1½ million euro. You will earn it back in 5 years. The last 10 to 20 years is pure profit. Then you have 300,000 euros left over every year

So the WASTEGONE will last 15 to 25 years?

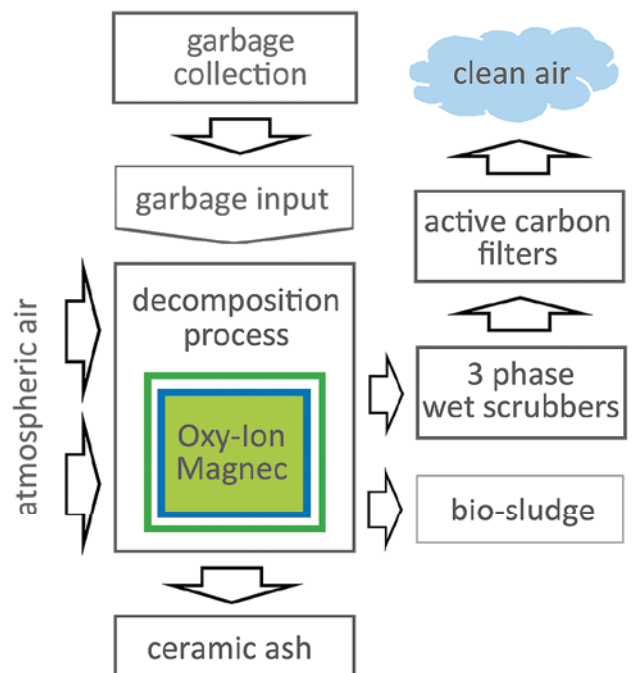
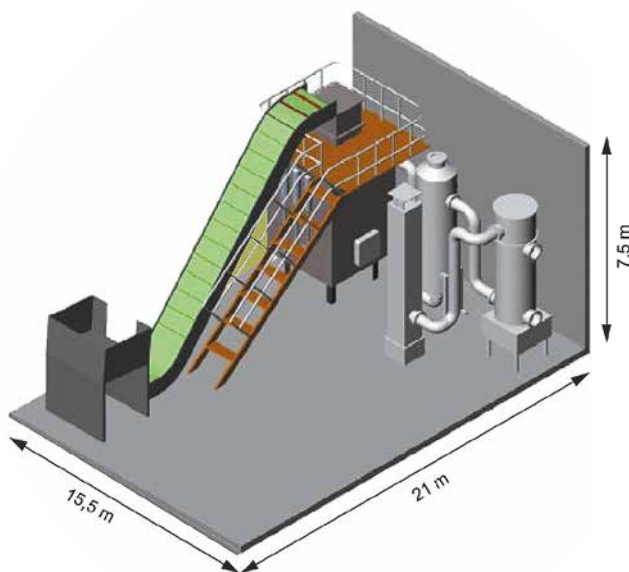
Herman: "Exactly. The magnets continue to do their job. Furthermore, the WASTEGONE has very few moving parts. Except for the conveyor belt to the room. As a result, you also have very little maintenance. In addition,

we have a special pre-selection machine. Everything that is not used is filtered out. We can even add a machine to mix concrete and stones CO₂ neutrally and grind to new stones. By adding the ceramic ash you also get stronger stones."

Is the machine itself recyclable?

Herman: "Haha, guaranteed. The machine is made of stainless steel, so you can shred it and reuse the magnets."

Process WASTEGONE



Which large companies that want to reduce their environmental footprint are you looking for?

Herman: *“Tata Steel for example. The WASTEGONE, powdered and well, can extract energy from the coals. There is no nitrogen production in the entire process, CO₂ and the 50 milligrams of particulate matter per cubic meter can be reduced to 0.8 milligrams (0.8 mg Nm₃). Because we generate electricity during the process, we can also make the step to CO₂, Nitrogen-free hydrogen. The air we use is washed 3 times, so you don't have any stench. And the combination of magnets and air create an oxidant that dissolves the dioxins and furans. As a result, we fall far below the strictest environmental standard.*

*The economical,
integral
and green
solution*

But also hospitals. For medical waste, they sometimes pay 1200 to 1300 euros per ton. We can ensure that their waste disappears. Radioactive material is neutralized with a microwave using special radiation. The end product is electricity and hot water with which you can light and heat the entire hospital. Suppose you have too little waste. Then you can add waste to get the desired power.

And Schiphol. You can make bales and other waste streams from the grass between the runways. The WASTEGONE converts this into energy that you can use to light and heat the entire building.”

Where could companies place the system?

Herman: *“Preferably on the site itself. Otherwise, transport must take place. Then you can easily install a hot water pipe and electricity cable to your building from the WASTEGONE.”*

Could you run or have the WASTEGONE run for businesses?

Herman: *“That is not even necessary. The WASTEGONE is easy to operate.*

You just as easily throw a bag on the belt as in the container. You can easily process 100 tons of waste per year with 4 people per team.”

TEXT: JAAP VAN HAASTRECHT

DOCUMENTS: HERMITAGE ECO SOLUTIONS

Videos & links

- 1. WasteGone processes waste streams without CO₂ emissions**
<https://youtu.be/FHZ3RJ74RLU>
- 2. HaHerND | Van afval naar energie**
<https://www.triodos.nl/artikelen/klimaat/hahernd-van-afval-naar-energie>
- 3. Sir David Attenborough speaks for so many of us...**
https://www.linkedin.com/posts/nigeltopping_eyeson-cop26-cop26-ugcPost-6860998057031426048-_7bd
- 4. Save Soil: Our Very Body | Conscious Planet**
<https://twitter.com/SadhguruJV/status/1467365618462695424?t=xeDn0TLrASCoykBACmcRUA&s=08>