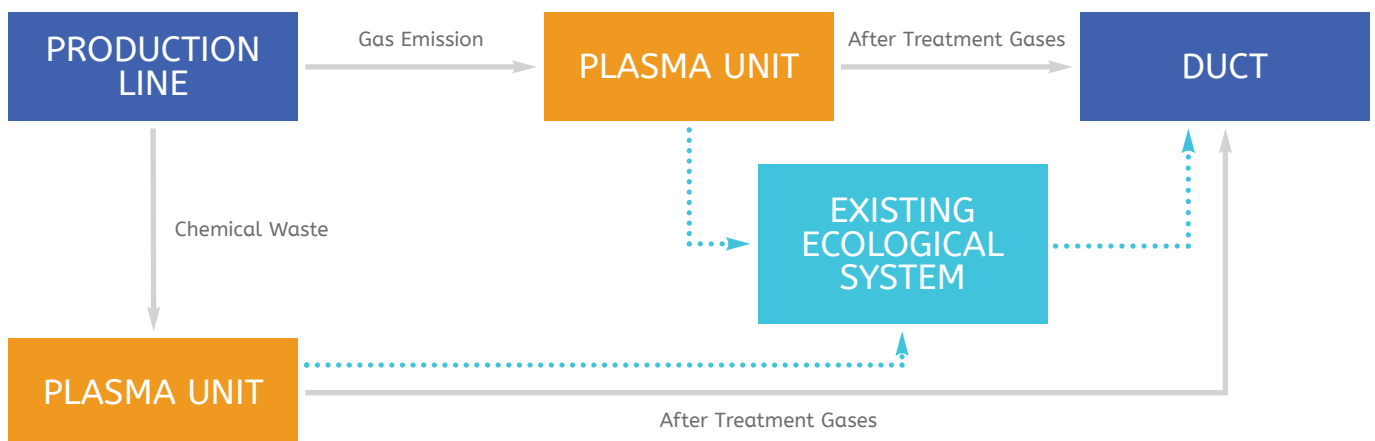


# TREATMENT OF GAS WASTE



The system can be easily modified, calibrated and adopted into any industrial organic gas polluting production line. The process is continuous and connected to the production line on-site. The system is connected directly to the source of gasses, and evacuates them as CO<sub>2</sub>, H<sub>2</sub>O and halogen acids. The process has a cost advantage over all other known alternative treatment systems.

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## THE TECHNOLOGY

Insertion of plasma method into chemical engineering technology – an environmentally friendly proprietary plasma torch technology that efficiently and completely breaks apart the molecular bonds of chemical (organo-halogenic) waste and converts the chemical waste pollutions into non-toxic gases, by-products (halogen acids).

## THE PROCESS

The special gas reactor is equipped with plasma torch. The contaminated gas is supplied directly from the production-line in real time due to sub pressure in reactor.

As result of the interaction between gas waste streams and high temperature ionized air jet (about 3000-3500°C – specified on wastes type and flow rate) the following processes are going on: destruction of practically all thermo-stable components contained in the gas waste, gasification of organic compositions to CO<sub>2</sub>, H<sub>2</sub>O and formatted halogen acids.

The formed products of hot gas mixture are then exposed to rapid cooling (quenching) to eliminate formation non-desired compounds such as dioxins, furans, etc.

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## TREATED MATERIALS

The system is designed to treat gases such as: Methyl Chloride, Methyl Bromide, Ethyl Oxide ,Dioxides, Isopropylamine (IPA), Pollutant gas emissions containing Methylene Chloride and others.

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## GWST SPECIFICATIONS

> Dimensions – W-1.80 L-1.10 H-2.50

> Electricity : 3 X 380V

> Power : 30-40 KW

> System utility requirements :

- Cooling water: 5-7 m<sup>3</sup>/hr, 280°C ( close lope )
- DI water: 300 lit ( needed only once )
- Compressed air – 6 barg, 600Nm<sup>3</sup>/hr
- Instrument air- 6 barg

> Connections

- Cooling water inlet/outlet : 1.5", ASA 150#
- Compressed air inlet : flange 1.5", ASA150#
- DI WATER inlet : flange 1", ASA150#
- Waste gas inlet : flange 2", ASA150#
- Treated gas outlet : flange 4", ASA150#
- Instrument air inlet : 1/2"BSP female.

- > Materials of constructions:
    - Wet part – stainless steel.
    - Programmable – Fully Controlled with advanced PLC including a colored Touch Screen.
  - > Communication – The GWTS local PLC can be connected to the main control room.
  - > Installation – as part of the existing production-line
  - > Connected to the customer's absorption system – With potential to produce a recycled gas.
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## OPERATION AND SAFETY

The system is user-friendly, easy to operate, maintain, and safe according to Hazop Resume:

- > Interlocks – The systems is equipped with interlocks for safe operation.
- > The system is sealed against surrounding environment, and is constantly under pressurized.
- > The system operates continuously in accordance with customers' specific needs.
- > Operation on demand.
- > Designed based on ANSI standards.
- > The system is classified as 'Gen Purpose'.

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