

Over 60 years' expertise in

# WASTE TREATMENT TECHNOLOGY



Your environment, Our mission

## Our Key Technology: The Pulvaporizator®

Thanks to its revolutionary thermal oxidizer called Pulvaporizator®, VICHEM offers a treatment of hazardous or very hazardous waste, while maintaining an extremely low level of dioxins and nitrogen oxides. The Pulvaporizator®'s concept is designed as one of the most advanced low-NOx & low-dioxin thermal oxidizer. The Pulvaporizator® atomizes and vaporizes the waste in one single step, hence achieving:

- Complete destruction: DRE > 99.9999% due to high turbulence
- No risk of plugging with salt or other type of solids
- Treatment of high viscosity liquid waste with solids & salts, & all pulverulent solids without using a rotary kiln
- Simultaneous processing of different liquid streams
- A capacity ranging from 0 to 120%
- Treatment of very low heating value waste
- Use of all types of fuel as heavy oil or hydrogen

## Scope Of Supply

From engineering to commissioning including all equipment as heat recovery system, acid production, De-NOx system, gas filtration, etc...

### **Applications**

#### **Centralized Solid Waste Treatment**

- Automatic waste feeding system
- Special water tube boiler to avoid plugging & corrosion

#### **VCM or ECH Waste Treatment**

- High pressure steam production
- Anhydrous HCI gas recycled to oxychlorination reactor
- No dioxins

#### **Carbon TetraChloride Decomposition**

- HCI solution recovery
- Steam production
- No dioxins

#### **Petrochemical Waste**

- Spent caustic soda, ethylene, Butane, Ethyl benzene, Polyethylene, SBS, oily sludges, TDI, etc.
- Production of steam and electricity

#### Sludge from Refinery

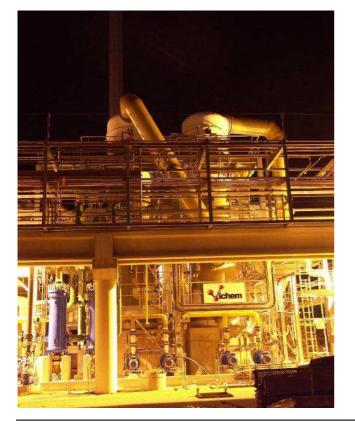
 Water tube boiler producing 40 barg steam followed by electricity production

## PCB Transformer Dismantling & Recycling

- Destruction of PCB (PolyChloroBiphenyl)
- Copper and scrap steel recovery
- HCI solution recovery
- High pressure steam recovery
- Payback in less than 2 years

#### CDM Projects – HFC 23 Decomposition

- Technology recognised by UN Authorities
- No dioxins
- Instrumentation and Gas Measurement to meet CDM Executive Board requirements
- Payback in less than 6 months



## Pharmaceutical waste treatment, France

Capacity (kg/hr): 11000 kg/hr

Waste Treated: Chlorinated and Salted

- High corrosion resistance alloy Pulvaporizator®
- De-NOx system (SCR) to treat NOx
- Special water tube boiler to prevent salt plugging
- Recovery of HCI solution

# VCM & Waste Treatment Plant, Poland

Capacity (kg/hr): 4200 kg/hr

Waste Treated: Mix waste including VCM & PCB

- Three types of wastes (Solid, liquid and Gas) in one single unit
- Anhydrous pure HCI gas recovery.
- Special boiler to prevent corrosion and plugging



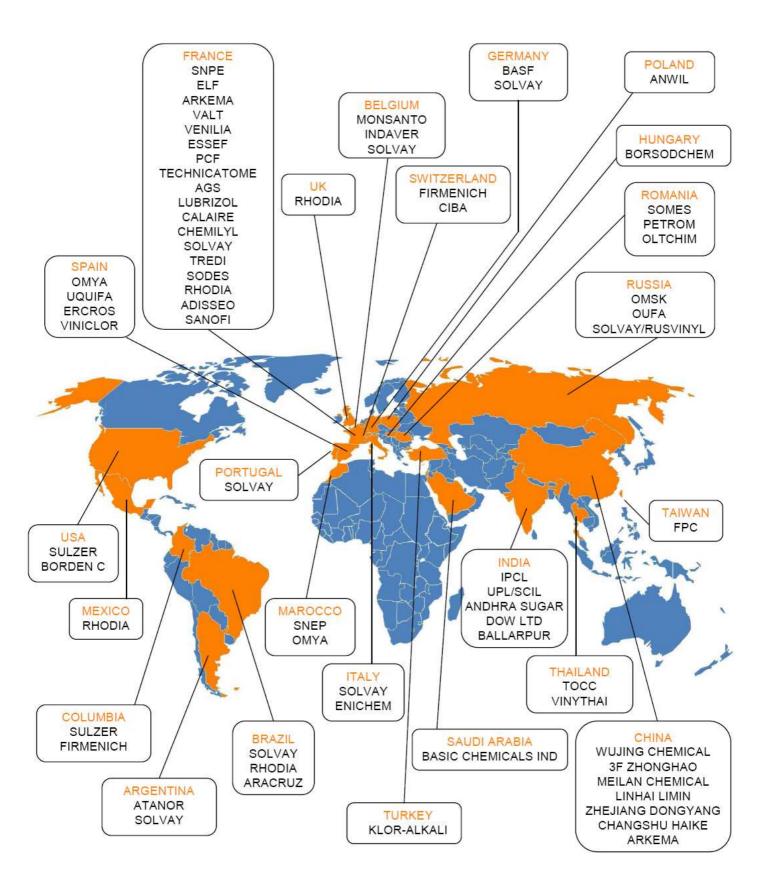


# Petrochemical & Refinery, Romania

Capacity (kg/hr): 87000 kg/hr

Waste Treated: Mix of Hazardous Waste

- Flexibility of running with 3
   Pulvaporizator® in one single unit
- De-NOx system (SCR) to treat NOx
- Recovery of superheated steam 40 barg





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