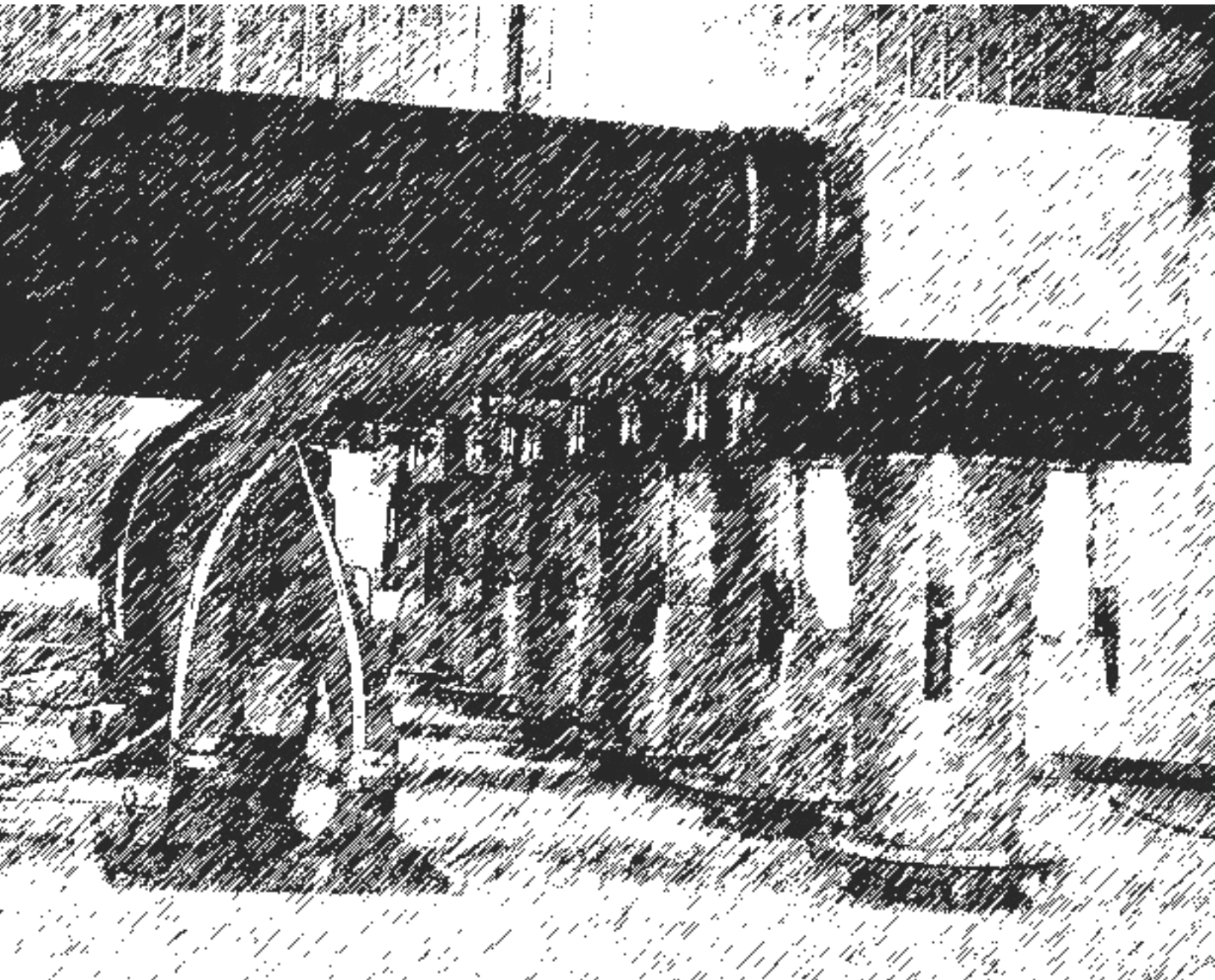




AIR STRIPPING



MAXI-STRIP[®] SYSTEMS

HOW IT WORKS - Maxi-Strip®

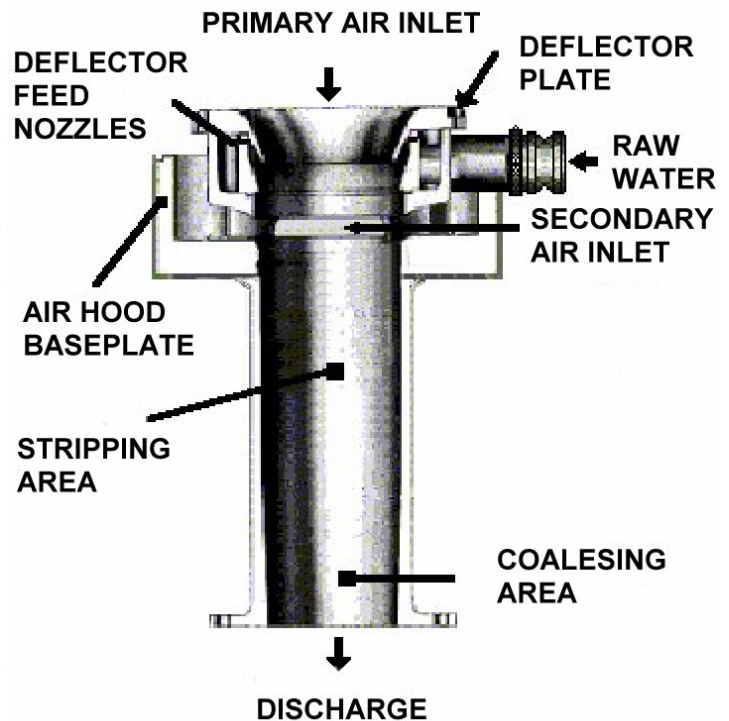
The Maxi-Strip® Hydraulic Venturi stripper is the heart of an engineered air stripping system designed to take advantage of Hazleton's advances in fluid dynamics.

The *Maxi-Strip* uses cavitating, high velocity fluid films within an open bore. The micro turbulence achieved reduces the fluid film boundary layers increasing the speed of mass transfer while creating the large surface area normally produced by packing or trays in traditional air strippers. The jet action and the venturi shape produced by the water, aspirate air, eliminating the need for noisy blowers.

Troublesome inorganic compounds can be forced to precipitate within this hydraulic venturi rather than on the surfaces of trays or packing as part of a Hazleton scale control strategy.

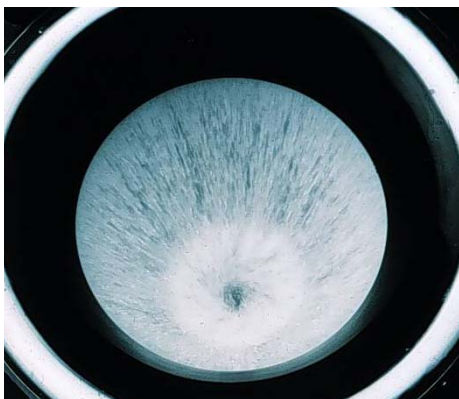
When configured for Cross-Flow gas mode, *Maxi-Strip* are extremely quiet, typically operating below 73 dbA. In Cross-Flow mode, each venturi aspirates fresh air, producing enormous volumes of dilute off-gas minimizing impact to local air quality.

For vapor phase treatment, off-gas volume can be reduced by recirculating the exhaust off-gas from a downstream stage to the *Maxi-Strip* intake of an upstream stage for reuse. The volume of off-gas usually determines the size and costs of vapor phase treatment equipment. This Counter-Current gas mode is available in various configurations from a closed loop design that eliminates air emissions to a multi-path counter-current arrangement extending the performance range to semi-volatiles.



Maxi-Strip® Venturi Model 300H

Hazleton Environmental developed the *Maxi-Strip* System to overcome the difficulties conventional air strippers experience treating industrial process waters and landfill leachates containing high concentrations of suspended and dissolved solids.



A view down the throat shows the hydraulic venturi



Still functional Maxi-Ring after months in a high scale application



MAXI-STRIP[®] System

The *Maxi-Strip* System is an extremely flexible modular design. The number of stages operating is determined by the flow rate through the system and the removal desired. Computer modeling, developed from extensive testing and field experience, is used to size an application and predict the performance of the operating system.

The flexibility becomes apparent when site conditions produce a significantly different influent concentration or flow – just add or turn off stages as required. Flow changes are only limited by the hydraulic capacity of the tank.

Each Stage is complete with: *Maxi-Strip* hydraulic venturi, recirculation pump, degassing sump and gas outlet. Several stages can be included in a single *Maxi-TankTM*.

The Maxi-Tank is engineered with a simple “gravity in – gravity out” flow concept linking all the stages. A single baffle automatically controls stage dilution, allowing for infinite flow turndown. Maxi-Strip Systems will strip along a defined curve from the maximum hydraulic flow to zero, even operating in batch mode.



Maxi-Strip Sump Stripper

The *Maxi-Strip cast-in-place concrete Sump Stripper* expands the flexibility of our modular design. Bolt on components allow construction of a water treatment plant of almost any shape or size.

The Sump Stripper's top pull-out design provides easy maintenance. Ordinary cleaning if needed is waist high, even in large flow systems . *1,100 gpm system shown*

Advantages

- **Plug resistant** - NO packing reduces or eliminates pre-treatment. Maxi-Strip are often used as reactors in metals removal systems
- **Easy maintenance** - Fast turnarounds, often without using tools.
- **High flows and low profile** - Capable of treating high flows from a large industrial complex with a system a fraction of the height of a typical packed tower.
- **High fault tolerance** - Probabilistic installations, loss of a stage does not effect remaining system.
- **Low noise** - With no blower, the system easily meets OSHA noise requirements.
- **Extremely flexible** - Add or subtract stages as influent quality or effluent criteria change.
- **Infinite turndown** - Defined performance at any flow from zero to the hydraulic limit and gas flow from saturation to the pneumatic limit.
- **Robust** - Rugged industrial equipment.
- **Impossible to flood or channel / No tuning** - Inherent stability, constant flux and infinite turndown eliminate tuning.

HAZLETON ENVIRONMENTAL, INC
Hazleton, PA 18202
+1 570-454-7515
www.hazletonenvr.com