



Heat exchanger provides indirect cooling for soil abatement system

TerraTherm, USA

Treating contaminated soil efficiently poses a tremendous challenge for environmental specialists, but TerraTherm, an environmental services company in The Woodlands, Texas, has risen to the occasion by introducing a system that takes advantage of the Munters Thermo-Z[®] air-to-air heat exchanger.

Portable soil abatement system

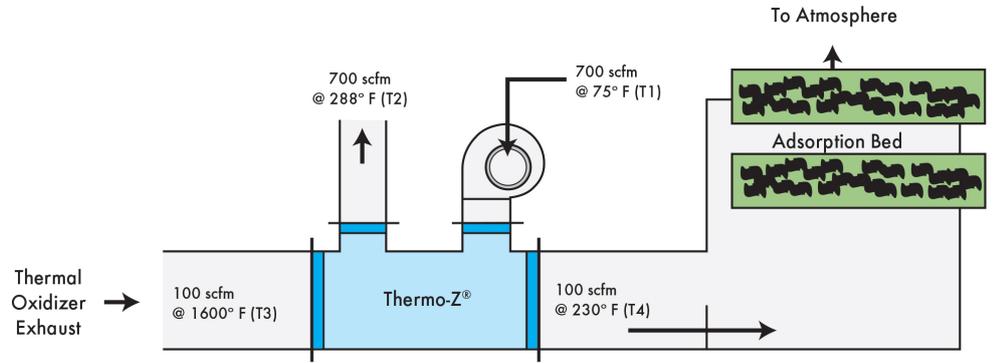
TerraTherm is an affiliate of Shell Technology Ventures, which develops commercial applications for concepts resulting from Shell Oil Company's research. Shell developed a portable soil abatement system mounted on a trailer that is marketed by TerraTherm.

Employing In-Situ Thermal Desorption (ISTD) technology, the system remediates a broad range of organic compounds such as PCBs, pesticides, petroleum wastes, and chlorinated solvents, all without excavating the soil.

At the heart of the process lies a heat source consisting of thermal blankets placed on the ground for surface soil remediation and thermal wells bored for remediation zones extending up to several hundred feet deep.



Thermo-Z® heat exchanger indirectly cools 1600°F incinerator exhaust gas to 230°F using outdoor air.



The Munters solution

Heating elements in the blankets or wells heat the soil, causing the contaminants to vaporize. A vacuum system then draws the vapors from the ground.

The heat in the soil destroys most of the contaminants, and the rest go to a vapor treatment system. A thermal oxidizer incinerates 90% of the volatile organic compounds (VOCs), with the remaining 10% passing through an activated carbon adsorption process.

To work effectively, adsorption requires lower temperatures than the 1600°F from the incinerator exhaust gas. A Munters Thermo-Z® heat exchanger indirectly cools the exhaust to 230°F using outdoor air.

With tens of thousands of contaminated sites in the U.S., TerraTherm sees a significant potential for the ISTD system and has begun production to meet the demand. Eventually, the company envisions several dozen units operating around the country.

Case study

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Advantages:

- Compact and portable system
- Indirect cooling without water or refrigeration
- Maintenance-free design

Would you like to find out if Munters has a solution for your company too? If so, please visit our website, www.munters.com

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