



A Division of TOPP Portable Air

***Pioneering Thermal Pest Management
Through The Use Of Controlled
Environments***

Miscellaneous Heat Treatment Applications



Introductions

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History

- ❑ **Pest-Heat was established in 1991**
- ❑ **Versatile fleet of specialized heating equipment.**
- ❑ **Heating equipment capable of providing heat at temperatures required for eradicating pest problems in wood products, food processing facilities, silos, transportation vehicles and many more applications**
- ❑ **Pest-Heat provides a complete turn key service to vendors in the pest eradication and extermination industries**
- ❑ **As the use of methyl bromide and other toxic fumigants become more restrictive, businesses are seeking alternative methods of eradicating pests and insects.**
- ❑ **Pest Heat developed the Thermal Pest Management System and Pest Eradication System through years of extensive testing and data collection working in partnership with the Defense Logistics Agency (DLA) and the United States Army Center for Health Promotion and Preventive Medicine (CHPPM).**



Equipment

Heating option needs for pest eradication:

- ❑ Duct able Electric Heating Units
- ❑ Direct Fired
- ❑ Indirect Fired
- ❑ Steam Heating Units

Multiple Fuel Sources:

- ❑ Propane
- ❑ Natural Gas
- ❑ Oil
- ❑ Electric
- ❑ Steam



Treatment Services

- Chamber Treatments
 - Wood Products/Pallets
 - Water Bottles
 - Furniture, Machinery
- Plant Treatments
 - Full Plant Treatments
 - Spot Heat Treatments
 - Bin/Hopper/Silo Treatments
- Apartments Buildings, Hospitals, Dormitories



Chamber Treatment

Pallet & Wood Product Heat Treatment Systems

Designed for non-manufactured wood products. The Treatment Systems utilize heat within a confined area to create an environment proven effective to meet international shipping regulations. Heat is distributed throughout the system to raise the core temperature of pallets, boxes, crates, or dunnage to eradicate a possible pest infestation.



Treatment Applications



Bed Bug –
Apartment Treatment



Plant Treatment



Flour Moth - Silo



Home Crawl
Space Treatment



Food Plant – Beetles



Wood Boring
Beetle

Procedure for killing *Bacillus anthracis* spores and other infectious biological threats.

- ❑ As a result of the post 9/11 Anthrax threats, the US Government implemented guidelines for killing of spores of this bacterial genus
- ❑ 2 hours heat treatment at 320°F
- ❑ Standard envelopes and postage stamps remained intact and in good condition at 320°F
- ❑ Plastic “windows” merely released and shrunk
- ❑ It was recommended that magazines wrapped in plastics not be treated in this fashion, but to be sterilized with a household bleach product

System Engineering

- Complete Project Management
 - Site Walk & Plan Review
 - Equipment Recommendations
 - Fuel Cost Analysis
 - Turnkey pricing proposal
 - Complete treatment setup/teardown
 - Equipment & Temperature Monitoring
 - Temperature data recording
 - Post Treatment Summary & follow up



Custom Home Staircase

- ❑ Solid Oak staircase infested with Powderpost Beetles
- ❑ Isolated staircase using plastic tarps at the top and bottom of the stairs which allowed the heat to penetrate the wood and not heat the other parts of the home, thus eliminating the pests using monitored temperatures ranging from 130°F to 135°F





Crawl Spaces

- ❑ Powderpost Beetles in support beams
- ❑ Installed plastic ground barrier to cover entire surface of the dirt floor
- ❑ Heat was ducted into crawl space
- ❑ Heated crawl space and wood support beams
- ❑ Core drilling of wood beams to allow for heat probes to monitor internal temperature

Chocolate Factory

- ❑ Infestation of Chocolate Factory
- ❑ Concern about the bi-products of combustion regarding flour and malt etc.
- ❑ Utilized electric heaters, placed strategically in area to be treated
- ❑ Used large industrial fans in conjunction with the heaters to promote adequate airflow to eliminate the possibilities of insect harborage



Aviation Treatment

- ❑ Concern for foreign insects being transported within the fuselage of a commercial air craft
- ❑ The use of chemical pesticides had an adverse effect on the passengers causing them to become ill
- ❑ Introducing heat into the front end of the air craft using a custom made enclosure to allow ducting of the heat
- ❑ Heat was then pushed into the front fuselage and allowed to exit at the rear of the air craft
- ❑ Temperatures were closely monitored to eliminate damage to the air craft cabin while eliminating all unwanted pests to include but not limited to mosquitoes and flies



Water Coolers

- ❑ Water coolers are treated inside of a thermal-heat chamber
- ❑ Water coolers are treated based on material type and density
- ❑ This method is proven to kill cockroaches, silver fish, palmetto bugs, ants and other destructive insects living within the water coolers





Bed Bugs

- ❑ Proper inspection of infested property
- ❑ Determine appropriate layout of equipment
- ❑ Eliminate all areas of clutter, such as, large stacks of clothing
- ❑ Remove items that are not heat tolerant such as, wax, aerosol cans, perishable foods etc.
- ❑ Establish the ideal temperature and time for eradicating the bed bugs this is accomplished thru research and documentation
- ❑ Monitoring of all areas being treated to insure temperature consistency
- ❑ Guarantees





Thank you!

Questions?

