

POD Reference BOGR20190220001

Title A Greek company active in the field of pest control by using a heat treatment method, is interested to form services agreements with companies in Europe, Asia, Middle East

Summary

A Greek company active in the field of pest control is interested to provide services to industrial structures, in Europe, Asia, Middle East, S. Africa, S. America, by using a heat treatment method.

The company designs, implements and maintains new or existing integrated insect and rodent management systems. Currently it supports leading companies, (especially in the food industry), in Europe and Asia using different sophisticated pest control methods.

Description

The company is on the market since 1980. The main office is in Northern Greece, with branches in other cities, including Volos, Thessaly. The company is interested to provide industrial heat treatment in food processing plants, flour mills, warehouses and storage structures (bins/silos) in Europe and Asia. Heat Treatment Applications Include:

- Food processing plants
- Pasta, cereal, bakeries, baby food, pet food
- Milling industry
- Flour mills, rice mills, wheat mills, rye mills
- Storage structures
- Bins & silos – concrete and steel
- Warehouses
- Food, beverage
- Organic processing plants and storages

In the process they are able to use

1. Electrical equipment
2. PLG equipment
3. A combination of the above

The company performs both partial (explanation is following)* and full facility treatments. Partial, spot treatments are suited to heat treat partial areas of a structure with high insect infestation levels. Entire facility heat treatments eliminate possibility of insect migration and cross-infestations and get rid of residual insect populations resident in the facility. Essentially, heat treatment is a structural treatment and is not recommended for commodities/product as the latter are inherently good insulators or bad conductors of heat. Therefore, the product/commodities/flour/grain has to be moved out prior to commencement of heat treatment. Heat is an effective tool in multiple strategies that are employed under the IPM (Integrated Pest Management) practices.

The three stages of procedure are:

- **Heating up**

For most insects the optimum developing and reproduction temperature is between +15°C and +35°C. At temperatures above approximately +45°C the pests, including their eggs and larvae, are killed within a few hours, because they cannot reduce their body temperature by perspiring and their own body protein and their enzymes coagulate.

The heating of all air in the building up to 50–60°C is achieved slowly. This way the building and the installations are not damaged by the heat. Producing a homogenous and economical air circulation is a must. An optimal air distribution is achieved after systematic case studies.

- **Holding the temperature**

The necessary temperature of 50–60°C is held over 8–18 hours to reach an adequate influence of temperature inside machines and in inaccessible hollows as well.

The expandable, wireless temperature monitoring system includes a laptop installed with proprietary temperature recording software, receiver, repeater and wireless temperature transmitters/sensors. The real-time temperature monitoring helps identify hot and cold spots in the treated area as well as regulates and controls hot air distribution. Comprehensive graphical temperature charts for the entire duration of a heat treatment are provided to the client along with the final report of the heat treatment.

The temperature can also be controlled easily with an infrared control pistol. The positions and blowing directions are modified accordingly. By doing this disadvantageous (in terms of heat treatment) room geometry as well as shielding by fixtures and installations can be compensated.

- **Cooling**

The heaters are turned off and the air, the installations and the building reach their normal temperature again so slowly that no heat tension damage is caused.

-Duration

For a single room(a hotel room) requires approximately 24 hours, whereas a whole building with several floors needs to be treated for at least 48 hours.

-Energy consumption

The energy consumption is influenced by different factors (about 2–4 kWh per m³ space).

***Partial treatments**

Two possibilities of partial treatments.

1. If the machines, that need to be treated, are not fixed permanently, they can be transported into a smaller room and be heated up there.
2. The other possibility is that the room is separated by polythene foils. Then only one part needs to be heated up.

Advantages and Innovations

Stored product pests have long been a problem in food processing plants, warehouses and storage structures (bins/silos). Stored product insect infestations deteriorate commodities both qualitatively and quantitatively by decreasing the nutritional value or causing mold, leading to a reduction in overall food quality. Heat treatment using elevated temperatures (122-140°F) has been used for over a century and is making a comeback as a non-chemical, non-corrosive, non-toxic and effective alternative to chemical fumigants.

This process offers unique advantages and benefits over chemical fumigations. These are:

- Absolutely non-toxic
- Flexible and mobile, suitable for any building or room
- All pests of any stage of development including the eggs are killed safely
- No resistance effects of the plugs
- Economical due to heating up through air circulation
- Simple carrying out
- No danger for personnel, neighbors or the environment
- No residues in machinery, objects or products
- No damage due to the heat because of the direct and exact control of the temperature
- No authority permission necessary
- Pests become visible because they come out of their hidings
- Preparation time is minimal
- Sensitive electronical components can stay there during the treatment
- Possible at any time of the year
- Positive promotion effects for industrial users
- Building/rooms will be available again after only 24h or 48h respectively
- No sealing is required as the space to be heated is under positive pressure
- Allows inspections during the heat treatment that helps identify areas of insect emergence and take corrective action such as cracks and crevices treatment
- Areas adjacent to structure under heat treatment such as shipping, offices etc. remain operational
- Low downtime and no associated cost of insurance and need to contact local authorities
- No phase-out
- Environmental friendly

The company's professional staff has over 11 years of experience

Stage of Development Already on the market

Comments Regarding Stage of Development

The company offers different ways of pest control treatment, including heat treatment to customers in Greece, (especially in the food sector), The company also has customers in Europe, Asia and Middle East.

Partner Sought

Type and Role of Partner Sought

The Greek company is interested to form services agreements with industrial units of the following sectors:

- Food processing plants
- Pasta, cereal, bakeries, baby food, pet food
- Milling Industry
- Flour mills, rice mills, wheat mills, rye mills
- Storage structures
- Bins & silos – concrete and steel
- Warehouses
- Food, beverage
- Organic processing plants and storage

Type and Size of Partner Sought:

SME <10

SME 11-50

SME 51-250

Type of Partnership Considered: Services agreement

Type and Size of Greek Company: Industry SME 11-49

Year Established: 1980

NACE Keywords

A.01.6.3 Post-harvest crop activities

M.70.2.2 Business and other management consultancy activities

M.71.2.0 Technical testing and analysis

N.82.9.9 Other business support service activities n.e.c.

Turnover (euro) 1 - 10M

Already Engaged in Trans-National Cooperation Yes

Additional Comments

The company, apart from Greece, has customers in Europe and Middle East, Asia.

The company is certified under ISO 22000, ISO 9001, EN 16636

Certification Standards ISO 22000 ISO 9001

Languages Spoken English, Greek