

- Furnaces
- Electric in air to 2000.c
- Vacuum
- Heat Treatment
- Controlled Atmosphere
- Melting
- Gas to 2300.c

BURN OUT & HEAT CLEANING OVENS

ENVIRONMENTALLY FRIENDLY

Burn Out, heat cleaning, drying, curing Ovens & Furnaces in both gas & electric, can be provided with afterburners to help solve your atmospheric pollution problems. Take advantage of our long term and on going R & D program in this area. Phone our friendly staff on (03) 98774188 to discuss your requirements.

The controlled heat cleaning or burnout process has been widely applied over the past decade to a variety of hydrocarbon-based materials coated on metallic parts.

Applications include

Paint or powdered coating line fixtures such as books, trees, trays & baskets. * Paint, grease & combustion contaminated automotive engine block, heads, camshafts, brake parts & other components. * Electrical varnish coated electric components such as motor armatures, stators & transformer cores.

* Reclamation of manufactured parts with reject of service damaged coatings. * Precious metal recovery in photographic film processing & PC board salvage. * Asphalt content tests.

Controlled Heat Cleaning

Ovens include a primary processing chamber, an integral afterburner, temperature controls on burner and air supply.

The primary chamber has options of cart or fixed basket loading a refractory firebox heats the load. This provides for best heat transfer to bring the load rapidly to required temperature depending on process.

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Temperature control of oven

The oven is supplied with 1 process timer & 2 temperature controllers. The process timer starts the afterburner firing. When the afterburner is approaching set temperature 760.C an alarm contact on the afterburner controller that is set slightly lower than set temperature will start the primary burner, this is to assure that no by-product from the primary chamber enters the afterburner chamber before it has reached the required temperature.

Most volatile ignite in the 370-400'C range, causing rapid temperature rise to the control's adjustable high setpoint. This automatically shuts down the primary chamber burner and air supply. As oxygen is consumed, flame is extinguished & roasting conditions established. Hydrocarbons decompose into volatilise and carbon particles (smoke) in this low oxygen environment. The decomposition rate is primarily a function of temperature, providing oxygen remains excluded.

Afterburners

Gaseous products pass into the afterburner at 340-400.C. These are an oxygen free mixture of volatile vapours & smoke. Oxidising this mixture requires the introduction of excess air, raising the temperature with a secondary burner, mixing the ingredients & holding them at temperature 760.C + long enough to complete oxidisation.

Programmer/Controller Option

On Highly Combustible content loads such as rubber coated parts, it is often desirable to ramp & step temperatures. Special controls are available to automatically follow these programs.

Water Mist Injection

Some coatings, notably epoxies contain oxygen in their solid formulation. As these decompose, the released oxygen establishes combustion & temperature rise results. Automatic water mist injection is used to suppress temperature rise from this & other sources.

Kilns, Furnaces and Ovens For Industry