

THE BRONX GROUP



BRONX THERMAL SOLUTIONS

Providing Thermal Solutions for the
Coil Coating Industry



www.thebronxgroup.com

The Bronx Group

THERMAL

Celebrating 80 years of providing high quality coil processing solutions, The Bronx Group of companies continues to remain a trusted specialist across the globe. Bronx Thermal Solutions was established in the UK to develop thermal technologies for its coating business.

The Bronx Group offers a range of coil coating solutions, from renowned colour coating lines to our embossing line range as well as a host of products which can be placed into an existing line.

Products in the Bronx Thermal Solutions range include: Paint Curing and Chemical Drying Ovens, Recuperative and Regenerative Oxidisers, Heat Recovery Systems, Coil Cleaning and Pre-treatment Sections and Strip Cooling Sections. Bronx Thermal Solutions also offers Thermal Audits and Upgrades as well as Feasibility Studies.

Thermal Solutions for Coil Coating



Typical Bronx Gas Convection Paint Curing Oven

Drying and Curing Ovens

Bronx Thermal Solutions offers a wide range of gas convection and electric infrared paint curing ovens specifically designed for drying of conversion coats and curing of painted strip in a continuous coil coating line.

All ovens are suitable for processing water based or solvent based coatings and come in both horizontal and vertical configurations.

Bronx's dedicated team of specialists provide thermal solutions for the coil coating industry. We pride ourselves on our ability to deliver optimal results and to help your business move forward.

SOLUTIONS

Thermal Oxidisers

Bronx Thermal Solutions, utilising a combination of in-house expertise and by working with recognised industry partners, offers a range of standard thermal oxidisers (TO) and regenerative thermal oxidisers (RTO) ranging from 5,000 Nm³/Hr to 100,000 Nm³/Hr all of which are compliant with the most stringent coil coating line emissions regulations. Bronx Thermal Solutions will guide the customer through the oxidiser selection process and provide advice on which type and size of thermal oxidiser best suits the customer's application.

Heat Recovery Systems

Bronx Thermal Solutions offers a range of well proven heat recovery systems for preheating of oven process make-up air, hot water or steam generation, factory heating, direct heating (for use with heating grids) and electric power generation all designed specifically for use with continuous coil coating line fume abatement systems. Bronx Thermal Solutions can tailor the heat recovery system to the specific needs of the customer.



Fume Abatement System with Primary and Secondary Heat Recovery Systems



Typical Bronx Regenerative Thermal Oxidiser on Bronx Line

Bronx Thermal Solutions
will guide the customer through the oxidiser selection process and provide advice on which type and size of thermal oxidiser best suits the customer's application.



Paint Coater Rooms

We offer a packaged paint coater room product designed to current ATEX regulations comprising fireproof enclosure, lighting, air ventilation, fire detection and suppression, climate control, lifting equipment and paint drum weigh scales.

All coater room safety systems are thoroughly tested after installation to ensure faultless operation.



Typical Paint Coater Room



Pre-Treatment Section

Cooling Systems

Bronx Thermal Solutions' range of cooling products includes:-

- Air coolers
- Water quenches
- Air knives
- Cooling rolls

All Bronx Thermal Solutions cooling equipment is designed to match the cooling cycle required by the product. All heat exchangers are designed within the Bronx Thermal Solutions design offices using specialist modelling software developed by Bronx Thermal Solutions.

Strip Pre-Treatment Systems

Bronx offers a complete range of multi-stage pre-treatment equipment specifically designed for pre-treatment of steel, aluminium or zinc strip prior to coating.

The equipment is manufactured from high-grade stainless steel and comes complete with options for chemical dosing controls and auto-raise lids.



Water Cooled Cooling Rolls



Shell & Tube Heat Exchangers for Primary and Secondary Heat Recovery

Heat Exchangers

Bronx Thermal Solutions specialises in the supply of shell and tube heat exchangers.

These are specifically designed using high-grade stainless-steel alloys to withstand the arduous demands of the coil coating fume abatement and heat recovery process.

Thermal Upgrades

Bronx Thermal Solutions' in-depth knowledge of the thermal aspects of the coil coating process allows Bronx Thermal Solutions to offer a thermal plant upgrade service not available from many other thermal equipment suppliers.

Product demand often changes following installation of the original thermal plant and as such equipment that could still be relatively new and well within its originally intended campaign life could become unsuitable for processing the new product. In some cases the demand for a product may increase beyond the capacity of the equipment installed.

In both of the above cases upgrade of the thermal equipment is a very commercially attractive option to scrapping the plant and installing new equipment Bronx Thermal Solutions is capable of confirming the suitability of the plant for upgrade (through our Feasibility Study service) and successfully executing the plant upgrade for a fraction of the cost of installing new equipment.



Our aim at Bronx Thermal Solutions is to deliver tailored thermal solutions to our customers. We pride ourselves on our department's engineering excellence and after-sales service.



Monitoring and Refurbishment

Bronx Thermal Solutions also provide services regarding monitoring systems and refurbishments of thermals.

Gas Analysing Systems

Bronx Thermal Solutions' engineers are experienced in the application of gas analysers to monitor emissions such as solvent, VOC's, CO and NOX. Additionally our engineers have expertise in the function of the associated control systems.

These systems ensure safe shutdown of the plant in the event of the detection of high solvent concentrations, as well as the necessary procedures to be adopted to ensure exhaust stack emissions are within the required legal limits. Bronx Thermal Solutions can provide continuous or non-continuous emission monitoring systems, depending on the customer's product and requirements.

Refurbishments

Thermal equipment is one of the areas of any production system that is subject to the most rigorous demands, therefore no matter what the quality of the equipment, refurbishment will form part of most production campaigns. Bronx Thermal Solutions excels in the refurbishment of most thermal equipment whether it be a low temperature oven or high temperature furnace or oxidiser.

Our team has carried out many refurbishments across the globe, with each project being completed on schedule and in most cases resulting in equipment performing better than when supplied new.

The refurbishment packages offered by Bronx Thermal Solutions often provide for turn-key solutions to ensure that the full support of the Bronx Thermal Solutions team can be utilised to ensure minimum downtime of the plant.



Oxidiser Chamber Before and After Refurbishment

**With our engineering expertise,
we can provide a thermal
solution tailored to your
business needs.**

Installation

Bronx Thermal Solutions provides an Installation Supervision only service in which the customer sources its own labour, tools and tackle to carry out the installation under the supervision of a Bronx specialist.

Bronx Thermal Solutions can also offer a turn-key installation package such that the installation supervision, site management, installation labour, tools and tackle are all provided by Bronx Thermal Solutions.



Installation of a Bronx Thermal System



Commissioning of a Thermal Paint Oven

Commissioning

Bronx Thermal Solutions employs full time commissioning engineers that specialise in the start-up of thermal equipment. The commissioning engineers not only provide basic start-up of the delivered equipment, but they also provide training for the customer's maintenance staff and essential aftersales service support to customers all around the world.

Spare Parts

Bronx Thermal Solutions employs a team of engineers dedicated to the provision of spare parts. Experts on the Bronx product range, our team work in our three main locations: Australia, the United Kingdom and Slovakia. Thus, our team is able to provide 24 hour support, 5 days a week with specialist out-of-hours support available on agreement.

All Bronx Thermal Solutions equipment is supplied with an Operating & Maintenance Manual that includes a full list of spare parts. Bronx Thermal Solutions sources any proprietary parts from suppliers with whom discounted OEM prices have been agreed.

As such Bronx Thermal Solutions spare part pricing is very competitive and all spare parts come with full warranty and technical support and an installation and commissioning service should the customer wish to use it.



Servicing, Training and Thermal Design

Servicing

The Bronx Thermal Solutions Installation and Commissioning Team are also available for general service work for any thermal related equipment.

During the warranty period, in the unlikely event of a fault, Bronx engineers will ensure that the fault is rectified with minimum of delay and during the post warranty period Bronx engineers are available for call-out for the service of thermal equipment.

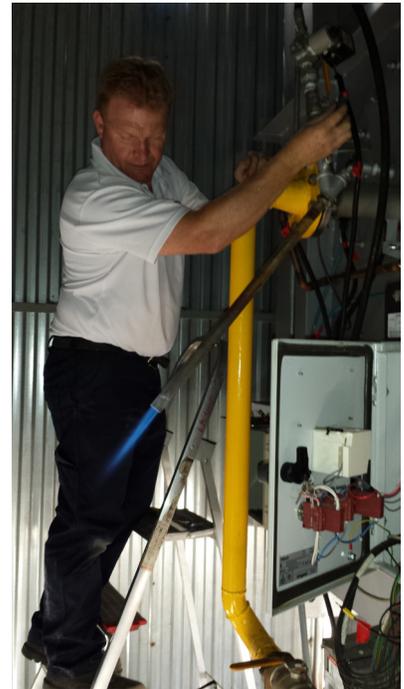
Bronx Thermal Solutions offer subscription based annual spares and service packages that can be tailored to the needs of the customer and ensure reliable plant operation.

Training Packages

Although the Bronx Thermal Solutions Aftersales Service Division can provide excellent service there is no faster service response that can be offered than the customer's own full-time employed maintenance fitters.

Bronx Thermal Solutions provide full training packages for all of the equipment supplied. Packages are often incorporated into the supply of equipment but ad hoc training can be provided by Bronx Thermal Solutions such that new operators can be trained or existing operators can be provided with refresher courses.

Training packages can be entirely practical with training provided at the customers factory or at one of the Bronx world-wide sites. Alternatively the training package can include an element of classroom based lectures designed to inform the customer of the theory behind the design and operation of the equipment.



Service of a Thermal Oxidiser



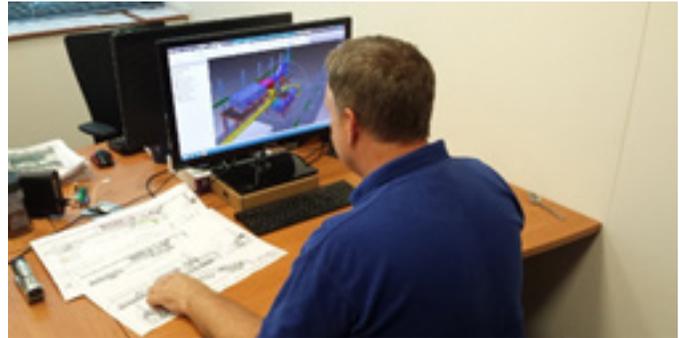
Bronx Operator Training

THERMAL

Thermal Design

Bronx Thermal Solutions' engineering design offices are based at all three of Bronx's main locations: Australia, the United Kingdom and Slovakia. The equipment designers at each of these locations are proficient in the use of 2D and 3D design systems.

The Bronx Thermal Solutions design team will engage with the customer on a regular basis to ensure that the design solution is tailored to meet all their expectations.



Bronx Thermal Design Team Member

Following each survey, Bronx Thermal Solutions provides a detailed report complete with readings taken, calculation results, conclusions and recommendations.

Thermal Surveys

Bronx Thermal Solutions offers a service to survey an existing thermal plant. The service is predominately aimed at Bronx Thermal Solutions' core coiling coating products but does extend to additional thermal equipment that is considered within the Bronx Thermal Solutions scope of knowledge and experience.

Typical areas to be surveyed would include but not limited to the following:-

- Oven Performance
- Cooler Performance
- Oxidiser Performance
- Burner Performance
- Stack Emissions
- Gas Consumption
- Solvent Concentration
- Assessment of Plant Value



Measuring Curing Oven System Flow Rates During a Thermal Survey

SOLUTIONS



PROVIDING THERMAL SOLUTIONS FOR THE COIL COATING INDUSTRY

Feasibility Studies and Thermal Control System Design

Feasibility Studies

For companies that are investigating the cost of introducing a new product requiring new thermal equipment or the upgrade of existing thermal equipment, Bronx Thermal Solutions offers a Feasibility Study service that allows projects to be accurately specified and priced.

Bronx Thermal Solutions will also support the presentation of the Feasibility Study to the owners or senior management to ensure that capital expenditure decisions can be based on accurate information.

Typical projects may involve:-

- Assessment of the cost and shutdown required to modify thermal equipment to introduce a new product.
- Assessment of the cost to relocate existing thermal equipment to a new site.
- Assessment of the cost to restart thermal equipment that has been mothballed for some time.



Bronx Thermal Solutions prides itself on its ability to provide companies with a packaged solution.

From installation of new thermal equipment to providing a feasibility study on existing equipment, Bronx Thermal Solutions can engineer a solution for your business.



Operator Control Desk Example

Thermal Control System Design

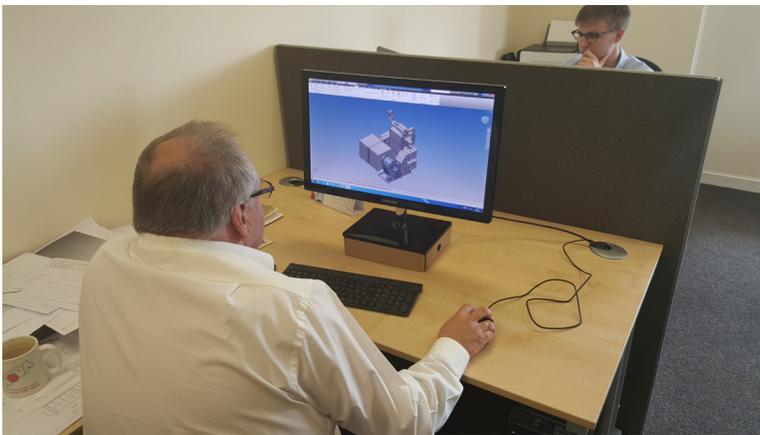
Bronx Thermal Solutions has its own in-house electrical and software design team that designs and builds the control panels and writes all the PLC and HMI software associated with the Bronx Thermal Solutions equipment.

The basic Bronx Thermal Solutions control system will be Siemens PLC and HMI software based and comprises the following main items:-

- Motor Control Centre
- Thermal Control Panel (including PLC)
- Operator Desk (including HMI)

With unparalleled training and thermal design packages, Bronx Thermal Solutions provides a complete service solution for your business.

Alternative PLC software systems can be supplied, and the Bronx Thermal Solutions electrical design team can also provide specialist SCADA systems if required.



Speak to one of our specialists today!

Whatever the thermal needs of your coil coating line Bronx Thermal Solutions is here to help. For further information, get in touch with one of our thermal specialists!





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