



# Power Generation Industry

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From our ISO 9001:2000 and QS 9000:1998 certified processes to our complete product offering and unmatched technical support, we have the ability to provide power generation industry customers with a single-source partner they can depend on. We have a full range of thermal insulation solutions for virtually any challenge.

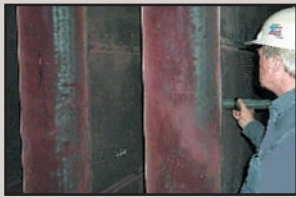
- **Superwool® Products** - Thermal Ceramics Superwool 607® and 607HT® product lines are available in various product forms: from blanket and strip to modules, paper and boards. Our low biopersistent Superwool products are produced from specific alkaline earth-silicate raw materials.
- **Blankets** - Available in a wide range of roll widths, as well as temperature and density compositions, these refractory ceramic fibre products feature low thermal conductivity, and low-heat storage capacity. Higher temperature alternative options are the Cerachrome® and Cerachem® blankets. Cerablanket® AC2, Superwool AC2 acoustic grade blankets that are also available in a variety of sizes and thicknesses.
- **Boards/Block** - Offering an entire temperature range of insulating boards, Thermal Ceramics has a wide array of thickness and size options. Ceraboard®, Blok® 607, TR-19™ and V-1100AL™ block products are strong, cut to size materials used as backup insulation.
- **Ceramic Fibre Modules and Engineered Systems** - Thermal Ceramics manufactures a complete line of module systems. Pyro-Bloc® modules are the only monolithic fibre log module with densities ranging from 8 to 15 pcf (*128 to 240 kg/m<sup>3</sup>*). They combine the insulating advantages of ceramic fibre with various attachment anchoring systems and construction design services available for lining industrial furnaces.
- **Dense Castables** - Thermal Ceramics has a complete range of dense castables that meet the specific property requirements within the power generation industries. The Tri-Mor®, Kaocrete® and Firecrete® castables are general purpose castables available in casting and gunning versions for service temperatures up to 3272°F (*1800°C*).
- **Insulating Castables** - Our range of Kaolite®, Firelite® and Tri-Mor insulating castables can be used both as hot face or back up insulation. Featuring low thermal conductivity these products are available in casting and gunning grades for service temperatures up to 3300°F (*1815°C*).
- **Abrasion Resistant/High Strength Castables** - Thermal Ceramics has an extensive range of both conventional and low cement castables suitable for the most arduous application areas. Kao-Tuff® casting and gunning grades are ideally suited for abrasion resistant linings. Tri-Mor Hicast®/Morflo® and Kaocrete HPM low cement castables exhibit ultra high strengths and excellent abrasion resistance for the most demanding application areas.
- **Low Cement Gunning Materials** - The Higung™ range of low cement gunning materials combines the superior physical properties of low cement castable technology with the benefits of gunning emplacement.
- **Specialities** - Tri-Mor Plascast®, Plasgun®, Plastic SiC/HT and Kao-Plas™ casting and gunning plastics offer the benefits of rammed plastic constructions with the ease and speed of faster installation methods. Thermal Ceramics Kao-Tab® may be cast or gunned and are resistance to chemical attack. Kaogun® pH is a gunning, corrosion resistant castable. The Kaogun 32 gunning castable is 70% alumina making an excellent choice in resistance to chemical attack.
- **K®, JM™, and TC™ Insulating Firebrick** - Our K, JM, and TC grade lightweight insulating firebricks offer low heat conductivity, plus the ability to withstand the most demanding reducing atmospheres. They are used as backup insulation and for hot face linings.
- **Hot Spot Repair Pumpables** - Our Cease Fire® 2000, Therm-O-Hot Patch™, Therm-O-Hot Patch HS, Kaofil®, Cer-Wool® and Superfil® Pumpables are designed for injection filling of refractory joints and cracks. Cease Fire 2000 is a unique, patented two-component refractory foam. It readily fills backup insulation voids, easily installed while the unit is on or off-line, and is suitable for temperatures up to 2000°F (*1093°C*). Therm-O-Hot Patch and Therm-O-Hot Patch HS are excellent for fast and easy hot surface repairs, adheres well to all surfaces, has extended shelf life, and has a service range up to 1900°F (*1038°C*). Thermal Ceramics Kaofil and Cer-Wool Pumpables are a one component mixture, highly insulating and can be used in hot or cold repairs. They have a service range of up to 2400°F (*1315°C*).

# Heat Recovery Steam Generator



## Stacks

Cerablanket  
Kaowool Blanket  
Superwool Blanket  
Pyro-Bloc Modules<sup>1</sup>



## Silencers

Superwool AC2  
Cerablanket AC2

## Ductwork

Cerablanket  
Kaowool Blankets  
Superwool Blanket

## Casing Hotspots

Hot Spot Repair Pumpables  
(Cease Fire 2000,  
Therm-O-Hot Patch,  
Kaofil Pumpables)

## Floor

Insulating Castables (Kaolite, Firelite, Tri-Mor)  
Insulating Firebrick  
Insulating Block (TR-19, Ceraboard)  
Pyro-Bloc Modules

## Auxiliary Burners

Pyro-Bloc Modules



1 - Thermal Ceramics is the largest supplier of ceramic fibre module systems in the world. Our product range includes a full line of monolithic (Pyro-Bloc), folded (Pyro-Fold<sup>®</sup>/Z-Blok<sup>®</sup>) and stacked modules (Pyro-Stack<sup>®</sup>). In this application, Pyro-Bloc is the best choice based on mechanical and velocity abuse resistance.

# Fluidized Bed Boiler



## Cyclone Discharge

Abrasion Resistant/High Strength Castables (Kao-Tuff, Morflo, Higon)  
Insulating Castable (Kaolite, Firelite, Tri-Mor) backup insulation

## Cyclone Separators

Abrasion Resistant/High Strength Castables  
(Kao-Tuff, Morflo, Kaocrete HPM, Hicast)  
Insulating Castables (Kaolite, Firelite) backup insulation  
Low Cement Gunning Materials (Higon)

## Ash Return System

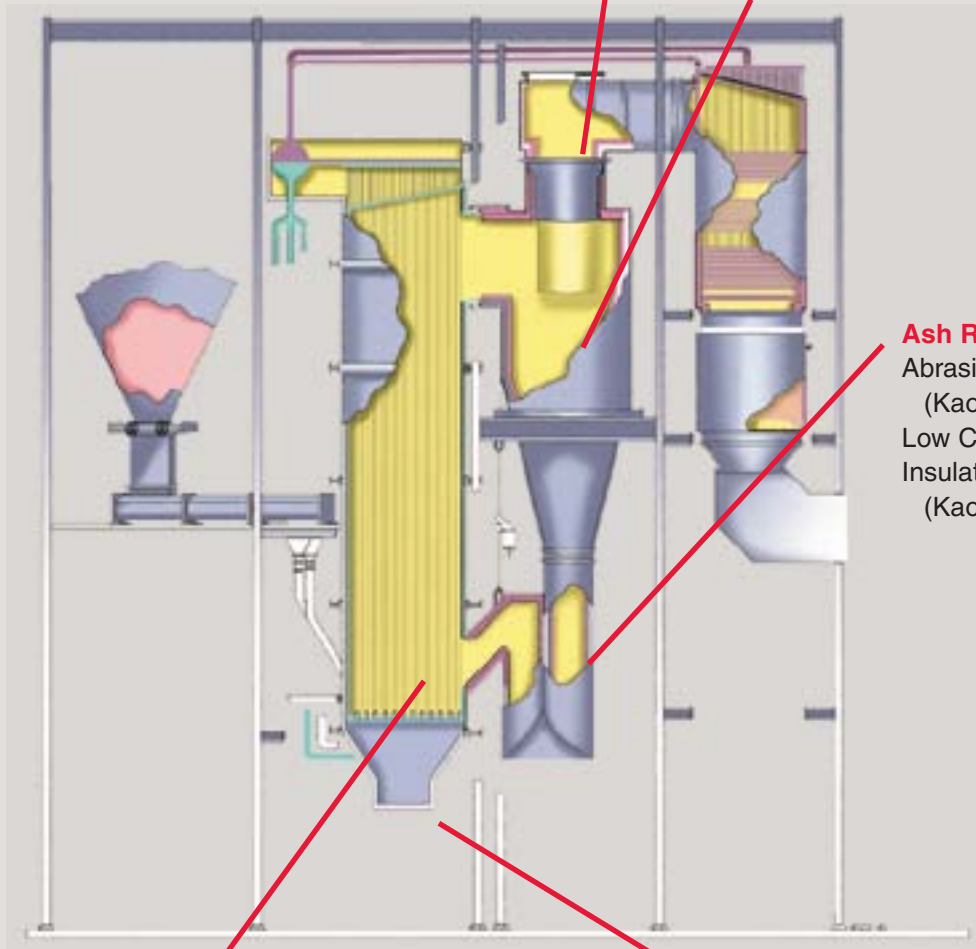
Abrasion Resistant/High Strength Castables  
(Kao-Tuff, Morflo, Kaocrete HPM, Hicast)  
Low Cement Gunning Material (Higon)  
Insulating Castables  
(Kaolite, Firelite, Tri-Mor) backup insulation

## Combustor

Abrasion Resistant/High Strength Castables  
(Kaocrete HPM, Hicast, Morflo, Higon, Kao-Tuff)

## Windbox

Abrasion Resistant/High Strength Castables (Kao-Tuff, Morflo)  
Insulating Castables (Kaolite, Firelite)



# Radiant Boiler



## Tube Seal Penetrations

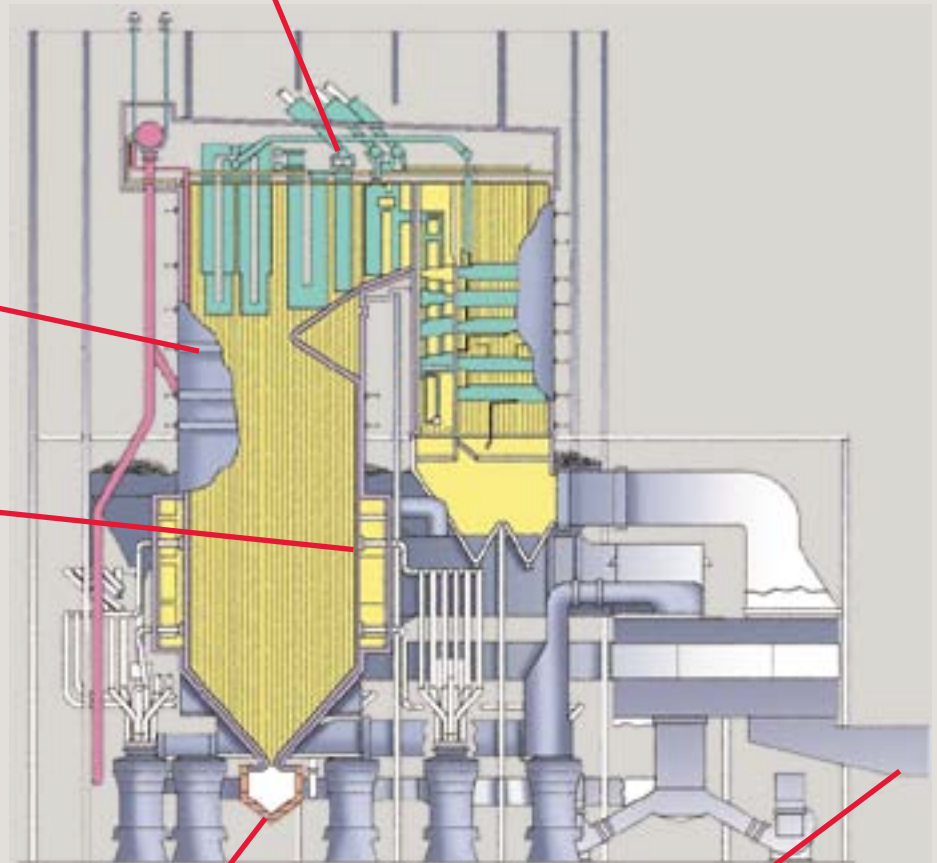
Dense Castables (Kaocrete, Firecrete, Tri-Mor)  
Hot Spot Repair Pumpables  
(Cease Fire 2000, Therm-O-Hot Patch, Kaofil, Cer-Wool Superfil Pumpables)

## Walls/Casing Hotspots

Dense Castables  
(Kaocrete, Firecrete, Tri-Mor)  
Hot Spot Repair Pumpables  
(Cease Fire 2000, Therm-O-Hot Patch, Kaofil, Cer-Wool, Superfil Pumpables)

## Burner Throats/Walls

(Oil, Gas, Pulverized Coal)  
Specialties  
(Kao-Plas, Plascast, Plasgun, Plastic SiC/HT)  
Low Cement Gunning Materials  
(Higun)



## Discharge Flues

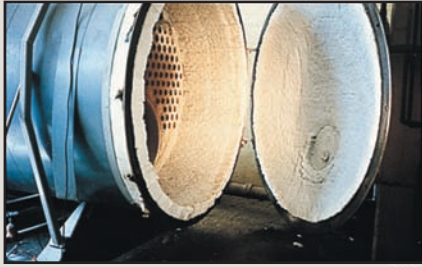
Dense Castables (Kaocrete, Firecrete, Tri-Mor)

## Ash Hopper

Abrasion Resistant/Ultra High Strength Castables  
(Kaocrete HPM, Hicast, Morflo)  
Low Cement Materials (Kaocrete, Tri-Mor)

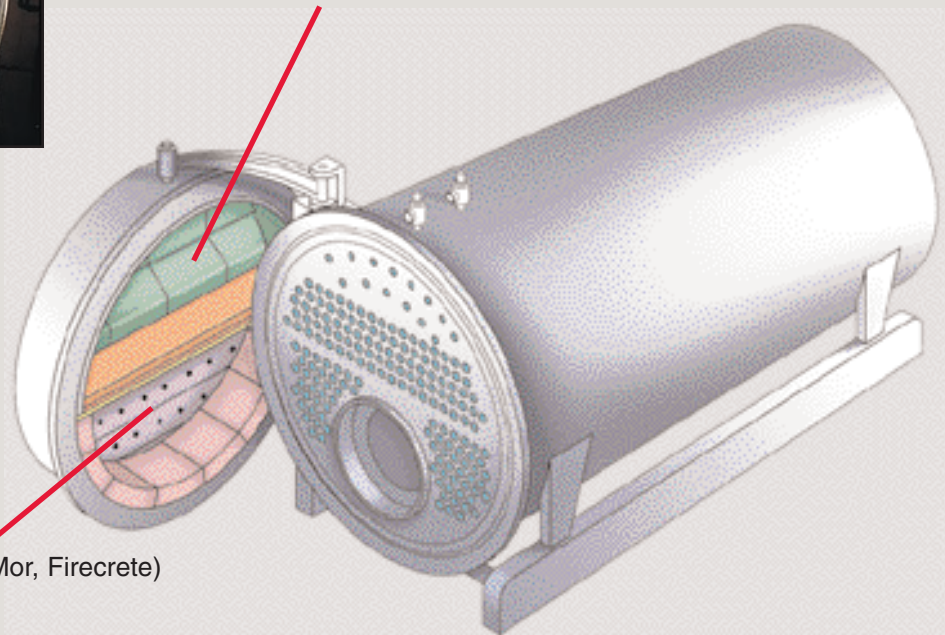
# Package Boilers

## Fire Tube Boiler



### Upper Rear Door

Insulating Castable (Kaolite, Firelite, Tri-Mor)  
Cerablanket  
Pyro-Bloc Modules



### Lower Rear Door

Dense Castable (Kaocrete, Tri-Mor, Firecrete)  
Pyro-Bloc Modules

## Water Tube Boiler

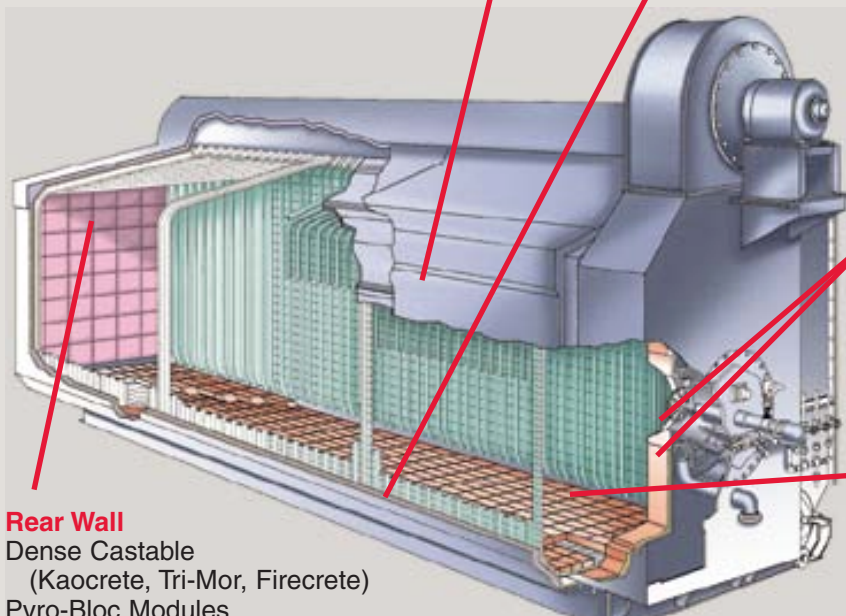


### Casing Hotspots

Hot Spot Repair Pumpables  
(Cease Fire 2000, Therm-O-Hot Patch, Kaofil, Cer-Wool and Superfil Pumpables)

### Walls (Behind Furnace Tubes)

Dense Castables (Kaocrete, Tri-Mor, Firecrete)  
Kaowool Blanket  
Cerablanket



### Burner Throat/Wall

Specialties  
(Kao-Plas, Plascast, Plasgun, Plastic SiC/HT)

Dense Castables  
(Kaocrete, Tri-Mor, Firecrete)

### Furnace Floor

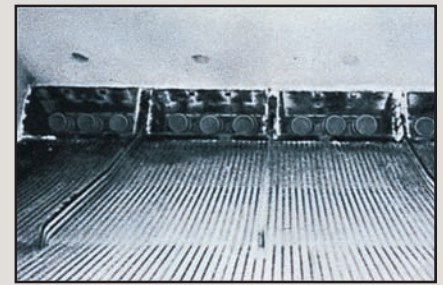
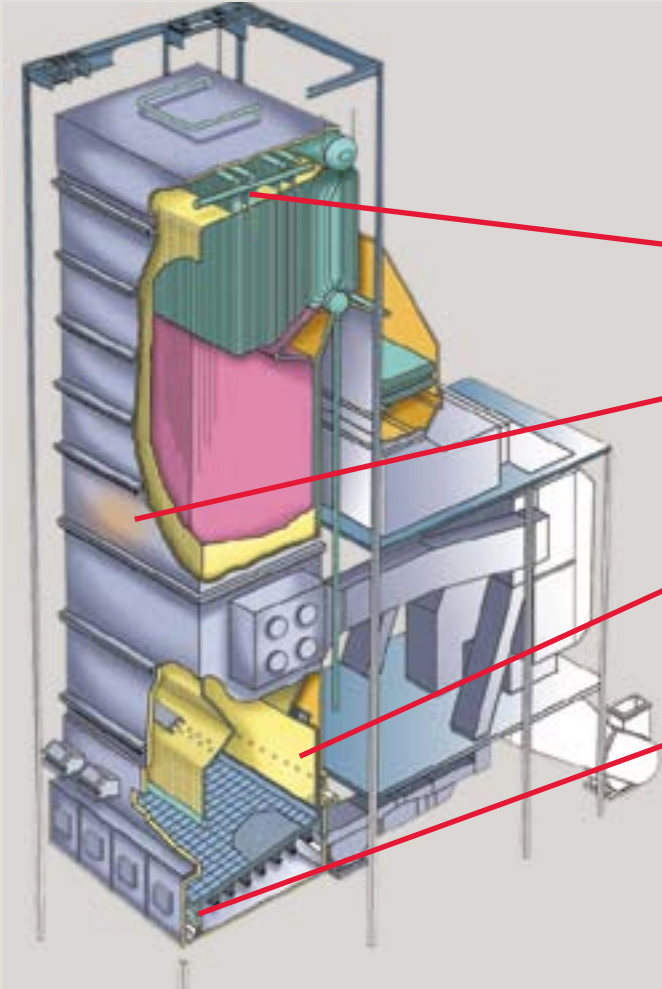
Dense Castables  
(Kaocrete, Tri-Mor, Firecrete)  
Insulating Firebrick backup insulation

### Rear Wall

Dense Castable  
(Kaocrete, Tri-Mor, Firecrete)  
Pyro-Bloc Modules  
Insulating Castable (Kaolite, Firelite, Tri-Mor) backup insulation  
Insulating Blocks (TR-19, V-1100AL) backup insulation

# Pulp and Paper Boilers

## Wood Fired Boiler



### Tube Seal Penetrations

Dense Castables (Kaocrete, Tri-Mor, Firecrete)

### Walls/Casing Hotspots

Dense Castables (Kaocrete, Tri-Mor, Firecrete)  
Hot Spot Repair Pumpables  
(Cease-Fire 2000, Therm-O-Hot Patch)

### Lower Furnace Walls

(Inner Surface)  
Specialties  
(Kao-Plas, Plascast, Plasgun, Plastic SiC/HT)  
Low Cement Gunning Materials (Higun)

### Discharge Chute

Abrasion Resistant/Ultra High Strength Castables  
(Kaocrete HPM, Hicast, Morflo)

## Recovery Boiler



### Tube Seal Penetrations

Dense Castables (Kaocrete, Tri-Mor, Firecrete)

### Upper Furnace Walls (Inner Surface)

Specialties (Kaogun 32, Kao-Tab)  
Abrasion Resistant/Ultra High Strength Castable  
(Tri-Mor, Firecrete)

### Walls/Casing Hotspots

Dense Castables (Kaocrete, Tri-Mor, Firecrete)  
Hot Spot Repair Pumpables  
(Cease-Fire 2000, Therm-O-Hot Patch)

### Lower Furnace Wall and Floor (Inner Surface)

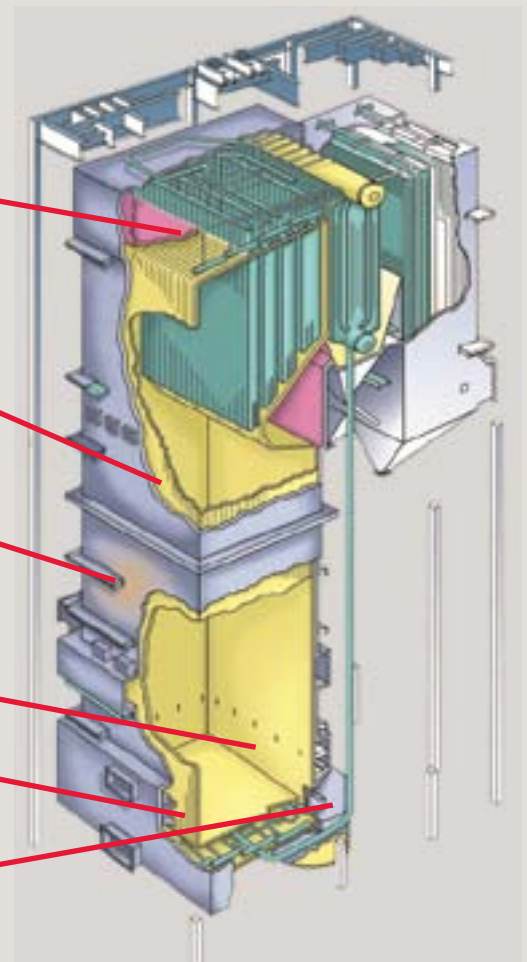
Abrasion Resistant/Ultra High Strength Castable  
(Kao-Tab, Tri-Mor, Firecrete)

### Windbox

Dense Castables (Kaocrete, Tri-Mor, Firecrete)

### Dissolving Tank

Abrasion Resistant/Ultra High Strength Castable  
(Kaocrete HPM)  
Specialties (Kaogun pH)





# Thermal Ceramics

## Global Marketing Communications Offices

### Thermal Ceramics Americas

2102 Old Savannah Road

Augusta • Georgia • 30906

T: +1 (706) 796 4200

F: +1 (706) 560 5841

E-Mail: [tceramics@thermalceramics.com](mailto:tceramics@thermalceramics.com)

### Thermal Ceramics Asia Pacific

28 Jalan Kilang Barat

Kewalram House

Singapore • 159362

T: +65 6273 1351

F: +65 6273 0165

E-mail: [thermalceramics@tcasia.com.sg](mailto:thermalceramics@tcasia.com.sg)

### Thermal Ceramics China

No. 18 Kang An Road • Kangqiao Industrial Zone

Pudong • Shanghai • 201315 • People's Republic of China

T: +86 (21) 6812 2200

F: +86 (21) 5812 3529

E-mail: [info@morgantcs.com.cn](mailto:info@morgantcs.com.cn)

### Thermal Ceramics Europe

Tebay Road • Bromborough • Wirral

CH62 3PH • England

T: +44 (0) 151 334 4030

F: +44 (0) 151 334 1684

E-mail: [marketing@thermalceramics.co.uk](mailto:marketing@thermalceramics.co.uk)

## Power Generation Sales and Marketing Office Locations

| Americas              | Europe                  | Asia                  |
|-----------------------|-------------------------|-----------------------|
| North America         | United Kingdom          | China                 |
| Canada                | T: +44 (0) 151 334 4030 | T: +86 (21) 6812 2200 |
| T: +1 (905) 335 3414  | F: +44 (0) 151 334 1684 | F: +86 (21) 5812 3529 |
| F: +1 (905) 335 5145  | Italy                   | Dubai                 |
| United States         | T: +39 03 77 91 08 15   | T: +971 (4) 8833 807  |
| T: +1 (706) 796 4200  | F: +39 03 77 91 08 30   | F: +971 (4) 8833 083  |
| F: +1 (706) 560 5841  | Netherlands             | India                 |
| South America         | T: +31 (0) 187 64 14 66 | T: +91 (44) 2522 4897 |
| Argentina             | F: +31 (0) 187 64 28 81 | F: +91 (44) 2521 3709 |
| T: +54 (11) 4373 4439 |                         | Japan                 |
| F: +54 (11) 4372 3331 |                         | T: +81 (3) 5759 2758  |
| Brasil                |                         | F: +81 (3) 5759 2793  |
| T: +55 (21) 2418 1366 |                         | Korea                 |
| F: +55 (21) 2418 1205 |                         | T: +82 (31) 735 5100  |
|                       |                         | F: +82 (31) 735 5106  |
|                       |                         | Singapore             |
|                       |                         | T: +65 6733 6068      |
|                       |                         | F: +65 6733 3498      |