

# Aluminum - Calciner to Furnaces

- Dry out of refractory lining
- Heat Up with sealed furnace and positive furnace pressure
- Special Burner nozzle, wont blow out even at high pressure
- Burner capacity ranging vom 50°C to 1400°C
- Serving all sizes of furnace
- Worldwide availability



Our special dry out and heat up technology is based on the use of Hotwork International High Velocity Burners operating on an excess air basis, which have been especially developed for the dry out and heat up of all types and sizes of furnaces/kiln/vessels and refractory lined components. The system permits a positive pressure assuring uniform temperatures in the vessel/piping components etc.

Our system has been developed to ensure that precise temperature control of hot gas emissions generated by the high velocity burner can be regulated at all stages between 60°C and 1200°C, simultaneously eliminating hot-spots or stagnant areas within the vessel/furnace. The Hotwork International-Technology permits temperature uniformity of  $\pm 3^\circ\text{C}$ .



Applying the Hotwork method, using high velocity burners to dry out refractory offers the most precise temperature control, exact to the specification of the refractory manufacturer. The Hotwork method utilizes precise controlled convective heat for an accelerated moisture removal. Our unique systems allows an accurate temperature control from ambient up to 1200°C (2200°F) with an incredible high turndown capability of 100:1.

**Alumina Calcining:**

Dry out for refractory line cyclones, furnaces, ash coolers and interconnecting components. During a normal operation hot abrasive material is travelling at high velocity and will find flaws in a not proper dried lining. Hotwork uses multiple High Velocity Burners and strategically placed bulkheads to generate a uniform pressure and temperature distribution vs. natural heat flow which often causes cold spots and damage to the refractory.

**Aluminum Furnace:**

Using Hotworks method to heat up furnaces does not only increase the life time of the refractory, but can also pay very fast for fuel savings and increased production time due to less start-up time.

**Why the Hotwork Method?**

Most Furnace Burners can't operate at low temperatures required to dry out castable refractory. Sometimes doors are kept open of several days, exposing the ramp and hearth to cold air. Later on, when the door is again closed, the hearth and ramp are flooded with heat and sustain serious damage. If a gas torch is used to heat up the furnace, the radiant flames create problems with overheating the roof, while the floor and corners are still cold. Also the refractory surface tends to bake and seal preventing moisture to escape. At the end humidity in the furnace will increase.

There are many types of burners used for dry out and heat up. The Hotwork system has the greatest turn down range and operates at a positive or negative pressure. Our burner doesn't blow out, even at maximum air and minimum fuel.

Using High Velocity Burners allows a air tight sealing from the very start of the dry out or heat up. Any ingress of cold air is prevented.

Our Method applies convective heating which prevents hot spots. All parts, such as floors, ramps and corners are washed with Hot air to remove moisture.



**Location:**

Being an International company, we reach out to any location worldwide. With over 250 Burner sets and equipment's stored in our own hubs in Switzerland, India, China, The Philippines and Mexico, Hotwork International is offering a fast and reliable service in any location worldwide.

**Manpower:**

Highly qualified service engineers guarantee a smooth project completion at the highest quality and safety standards. Internal training and external safety measures are introduced as well as an internal and external evaluation of all burners and electrical components certifying the best possible service available for our clients.

*Swiss Quality and German Reliability .... complete engineering and supply*



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