

# **ZEECOLITE™**

Refractory Solutions



**BURNERS | FLARES | THERMAL OXIDISERS**  
**VAPOUR CONTROL | RENTALS | AFTERMARKET**





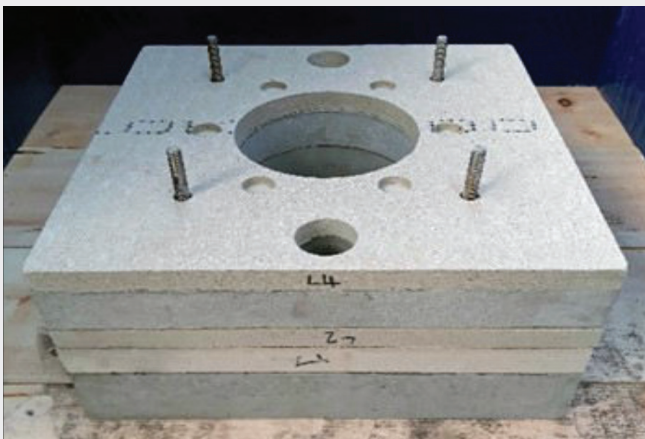
# ZEECOLITE

## Refractory Solutions

### The ZEECOLITE™ Tile

Are you experiencing efficiency and stability issues in your furnace? Are your burner tile retention systems failing prematurely? These issues are commonplace for operators around the world and are often attributed to outdated radiant wall burner tile designs used in industrial furnaces for more than 50 years. Recognising the widespread need to advance a component so crucial to maintaining furnace temperature, operating stability, and efficiency, burner system engineers at Zeeco developed a revolutionary piece of technology - the ZEECOLITE radiant wall burner tile.

The ZEECOLITE tile meets fundamental criteria for consistent burner performance, energy efficiency, and firebox reliability over a long service life. The one-piece modular design uses a specially-formulated 62% alumina low ferric oxide low cement castable as the hot face, backed by low mass ceramic fibre insulation boards to achieve excellent thermal efficiency, erosion resistance, and reduced weight. The tile assembly is self-supporting with a four-point 310 stainless steel embedded anchoring system used to attach the tile module to a furnace casing or a burner mounting plate. While traditional tiles use exposed side and bottom cleat fixings, prone to metal fatigue and oxidation, the robust anchor system of ZEECOLITE is completely independent of the surrounding furnace refractory and the combustion components of the burner system. The positioning of the anchors can be changed to suit any radiant wall burner design. In a recent case study, replacing conventional castable tiles with ZEECOLITE

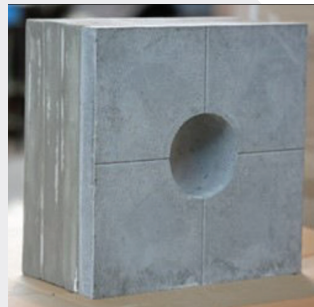


*Assembly of Insulation*

tile modules improved the thermal efficiency of the application by 55% and reduced the individual tile weight by 52 kgs (115 lbs.).

### Superior Performance

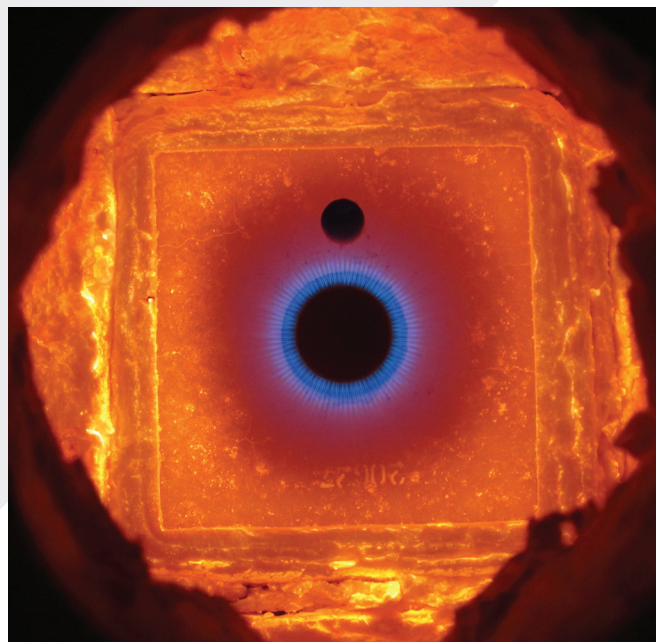
By eliminating vulnerabilities common to traditional designs, the ZEECOLITE tile reduces energy, operation, and maintenance costs for operators over the duration of a proven 15-year service life. The tile is pre-dried to 360°C (680°F) to ensure removal of both free and chemical water and prevent thermal cracking or tile failure during start up procedures. Backed by energy-efficient, low mass ceramic fibre insulation boards, the fully protected anchor system inhibits forward movement of the tile in relation to the burner gas tip to ensure longevity and reliability.



*ZEECOLITE Hot Face*



*ZEECOLITE Cold Face*



*ZEECOLITE in EDC Cracking Furnace*

## Furnace Applications

ZEECOLITE™ has been designed for use in flat flame, side-fired burner applications both in ethylene cracking and primary reforming furnaces. It is suitable for any existing or newly constructed furnace regardless of wall thickness or composition of surrounding refractory. Zeeco has successfully installed thousands of ZEECOLITE burner tile modules in ethylene furnaces worldwide.

## Ease of Installation

The ZEECOLITE burner tile module is designed for quick and easy installation either directly to a furnace casing or to a burner mounting plate for both new and retrofit applications. The four embedded anchors suspend the ZEECOLITE module without any movement due to the gravitational torque, relieving load/stress to the surrounding lining system of the furnace. If the anchor bolt pattern does not match the existing arrangement on the furnace mounting plate, additional holes can be drilled in the mounting plate using a template board. To assist with installation, we can provide eyebolts that thread onto the anchor bolts to support the weight of the tile whilst it is guided into the fully installed position.



*Eye Bolt Lifting Aid*



*ZEECOLITE™ Tiles in an Ethylene Application*





## The Zeeco Difference

By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion and environmental solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick, efficient response. We are lean and efficient, able to make decisions quickly, without bureaucracy and red tape. Our sales, engineering, and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.



Visit [zeeco.com/contact](https://zeeco.com/contact) for additional Global Location contact information



Choose to work with our dedicated, flexible, and innovative team, and you won't be disappointed. Call or email us today to request a quote or to learn more about our proprietary combustion systems.

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