



Kiln Car Refractory

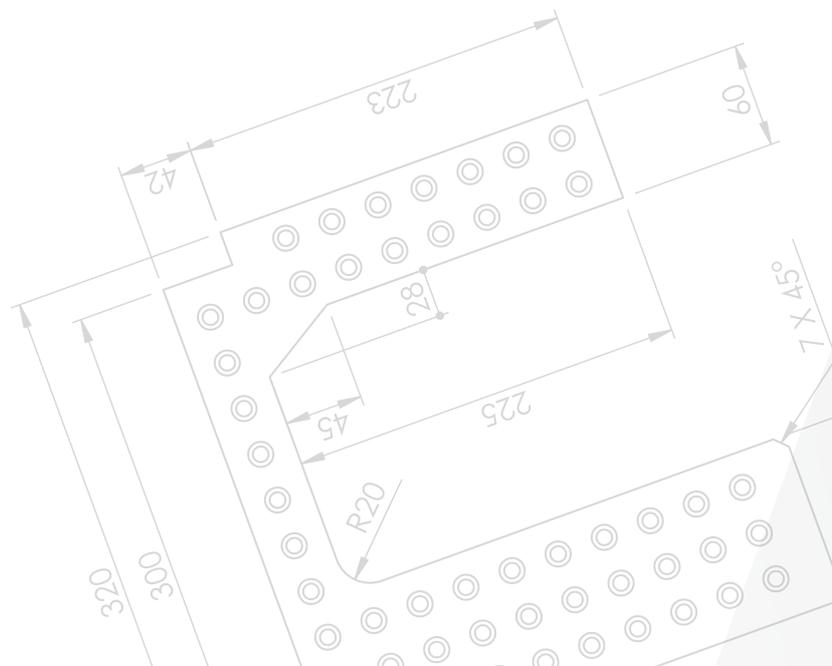
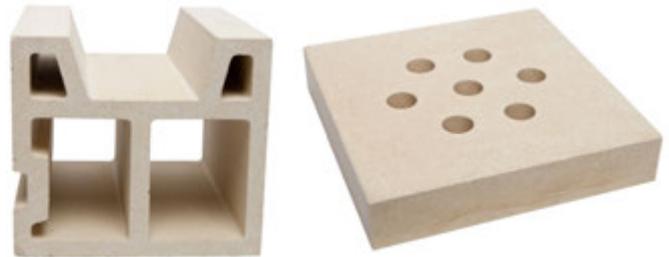
We offer a comprehensive range of kiln car refractory and can customise our product range to suit your individual needs. We use a cordierite-mullite material that works very well in operating temperatures below 1300°C and has been developed with the following properties:

- ✓ High compression strength
- ✓ High impact resistance
- ✓ Lower expansion rate
- ✓ Good thermal shock resistance
- ✓ Good thermal efficiency
- ✓ Long service life

These properties increase the lifespan of the kiln car refractory significantly, reducing downtime and maintenance costs. Providing our customer with the important benefit of keeping their fleet of kiln cars in the circuit for longer, increasing efficiencies and profitability.

Our product range comprises of light weight kiln car sub and superstructures, built with Perforated Batts, Viaduct Blocks, Support Blocks, Extruded Batts, Draught Hold Blocks, Deck blocks, Perimeter blocks and the full Kiln car supports and complete base structure.

Of the total heat input during a normal firing cycle, the kiln car base will consume somewhere between 15-50% of this energy. The present system of using insulating bricks to construct the perimeter of the kiln car is prone to cracking and deformation which in turn leads to poor seals between the kiln cars and the kiln as well as between the cars themselves. This at worst can lead to heat transfer to the steel structure of the cars and particularly to the bearings causing deformation and seizure. We have developed a perimeter block system design to eliminate all the above-mentioned problems. By employing the latest designs in the kiln car system significant energy savings can be achieved. The extruded hollow blocks fit together to form the perfect shaped kiln car perimeter, not only improving the seal, by also reducing the refractory weight of the car.



Siliconised Silicon Carbide (SiSiC) Wear Products

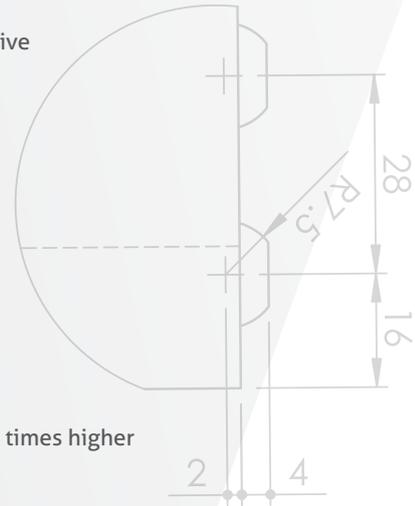
Annexus WA offers a comprehensive range of SiSiC wear resistant products for the harsh abrasive conditions encountered in the Brickmaking environment. Annexus WA can customise our product range, design and material selection, to suit your requirements.

Features and benefits of SiSiC ceramic:

- ✓ able to be formed with a reduced wall thickness
- ✓ exceptional processing abilities allowing for complex shapes and designs
- ✓ able to manufacture in monolithic forms reducing the number of joints thus eliminating potential wear areas and reducing premature failures
- ✓ working temperature of 1400°C
- ✓ Vickers hardness of 2000kg/mm²

The extreme hardness and high density of the SiSiC ceramic lead to wear ratio typically 10 -15 times higher than hi-chrome steel, Nihard or alumina equivalents.

Available products: Pug Knives | Core buttons | Burner tubes | Inserts | Tiles



PUG KNIVES

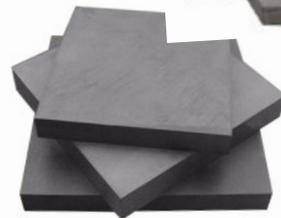
Annexus WA supplies pug knives manufactured in SiSiC, offering a range of advantages...

- Power savings due to weight reductions
- Less down time due to less change overs
- Lower maintenance costs
- Durability
- Performance
- Wear/Thermal Advantages



CORE BUTTONS & BURNER NOZZLES

Annexus WA SiSiC ceramic brick core buttons and burner nozzles are lighter and again the extreme hardness and high density of the SiSiC ceramic lead to wear ratio typically 10 -15 times higher than hi-chrome steel, Nihard or alumina equivalents. They are easy to use and require no modifications to the existing manufactures systems. These silicon carbide products reduce maintenance time due to less change overs and therefore result in higher profitability of your process.



INSERTS & TILES

Annexus WA can customise our product range to suit your individual site requirements, we supply SiSiC inserts and tiles to your design and tolerance specifications.

Dense Castable & Castable Products

Annexus WA offer a range of dense castable and castable products to assist with the rebuilding of your kiln cars. These products are used to assist with insulation and kiln car in-filling. Our castable products are packaged in 25kg bags, our fibre blankets and fibre boards are supplied in cartons to ensure protection during delivery. We supply these products individually or palletised for ease of delivery and application.

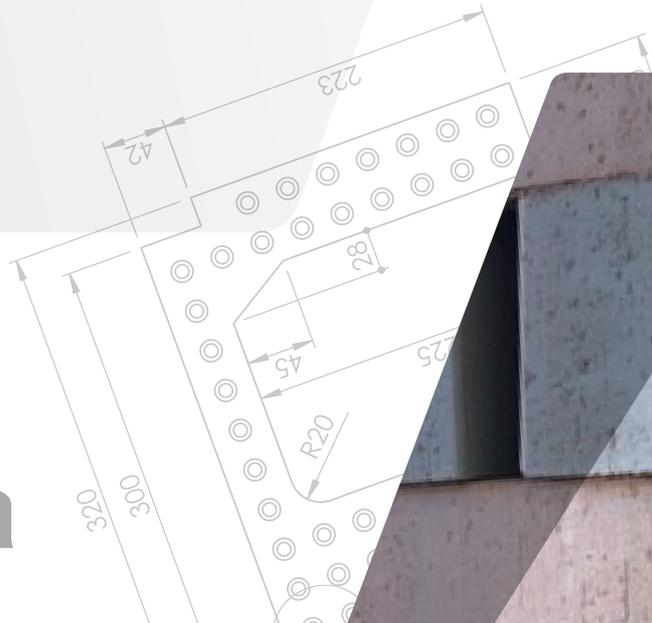
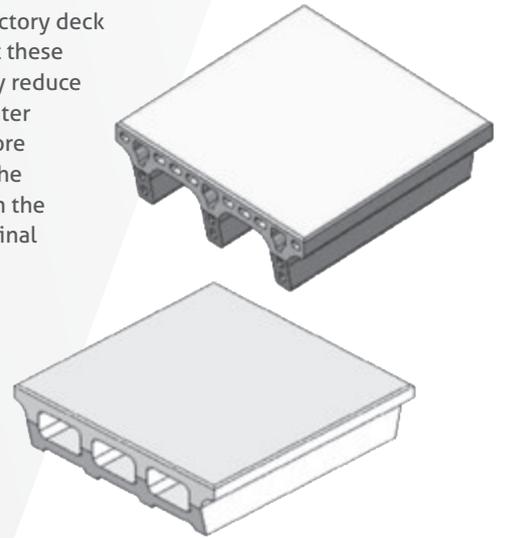
Dense Castable | Castable | Fibre Board | Fibre Blanket



Case Study

We undertook an independent evaluation of our product. We currently supply our refractory deck blocks and viaduct blocks with a fluted cross section and the logic has always been that these products would be a more thermal efficient product. Our fluted design features not only reduce the overall weight and density of the refractory block, but they increase strength. A lighter refractory deck block and viaduct block equates to a lighter kiln car and ultimately a more efficient kiln car. The flutes allow for a more efficient transfer of heat, air flow through the block and a reduction in thermal shock. With a more efficient refractory block in the kiln the heat and energy is absorbed far less into the kiln car and is rather channelled to its original target, curing the product (bricks) in the kiln.

The laboratory analysis took the fluted design concept, our newly formulated TUZ ceramic into account and under laboratory conditions confirmed that our products offer a far better thermal efficiency than that of a solid refractory block. The energy savings are significant, a fleet loaded with Annexus WA refractory products will start saving you energy cost from the moment you install them and will continue to save you costs into the future. With the current and rising cost of energy these savings are vital. Please note that the laboratory report is available for your review and comment, please ask your Annexus WA representative for a copy.



Get in Touch

Annexus WA
Unit 3/68 Callaway Street
Wangara WA 6065
Australia

Phone +61 (08) 9302 2576
Mobile +61 (0) 408 607 465
E-mail solutions@annexuswa.com



www.annexuswa.com

