

COMPANY BROCHURE

SPECIALIST REFRACTORY ENGINEERING.

Over 20 years experience in the Supply and Installation of Refractories to a variety of furnace applications for various industries including Iron and Steel, Cement, Aluminium, Glass, Chemical Processing, Biomass, Waste to Energy and Incineration.

Supply of Refractory, Insulation and Associated Materials. Manufacture and Firing of Precast Shapes. Manufacture of High Temperature Insulation Modules and Veneers. Site Installation, Furnace Engineering and Design Services.

20+
YEARS
EXPERIENCE

1600°C
SERVICE RATING

24/7
CALL OUT

SHEFFIELD, UK
JICRPL.CO.UK

PRODUCT RANGE

A comprehensive range of refractory and insulation materials supplied across every major furnace application, specified to the exact thermal, chemical and mechanical demands of your process.



MONOLITHICS

- Conventional, Low, Ultralow and No Cement Castables and Gunmixes
- Rapid Fire, Free Flow, Abrasion Resistant, High Strength, Low Iron and Chemical Resistant
- Insulation Castables and Gunmixes
- Mouldables, conventional or Phosphate Bonded



FIREBRICKS

- Alumino Silica Firebricks and Tiles from 40% to 95% Alumina
- Bauxite, Andalusite, Mullite, Silicon Carbide and Zircon



INSULATION FIREBRICKS

- 1100°C to 1760°C grade Insulation Firebricks and Tiles
- Diatomaceous Moler grade Insulation Firebricks



CERAMIC FIBRE & CALCIUM SILICATE

- 1000°C to 1600°C grade Insulation Blanket, Paper and Boards
- Ropes, Cloths and Mastics
- Modules and Veneers, Convolute and Stack Bonded
- Low Bio Persistent and Body Soluble



MORTARS

- Firebrick Mortars, Wet or Dry, Heat or Airset
- Insulation Firebrick Mortars, Wet or Dry, Heat or Airset



PRECAST SHAPES

- Custom manufactured refractory shapes, cured and fired to predetermined thermal profiles
- See Services section for full capability

PRECAST SHAPES

Custom refractory shapes manufactured at our Sheffield workshop to stringent quality control procedures, cured and fired to a predetermined thermal profile schedule.

Precast shapes simplify installation, reduce installation time, reduce on site labour and equipment costs, reduce material wastage, and reduce on site environmental hazards such as dusting. They eliminate the need for in situ curing and firing, allowing for a faster turnaround.

Improper water addition, mix time variations, over or under vibration and improper curing can drastically affect material quality. With precast shapes, cast in a controlled shop environment, the physical properties of a castable can be more fully optimised.

Our casting facility consists of large capacity, high intensity paddle mixers, controlled water addition equipment, heavy duty vibration tables and a custom built oven for drying and firing requirements.

We have the capability to manufacture the exact size and shape needed for your application. 3D designed mould patterns are manufactured to suit your needs, and lifting lugs, high temperature inserts and anchor fastenings can be incorporated if required.

TYPICAL PRECAST PRODUCTS

- Jambs, Lintels & Sills
- Nozzles & Tapping Blocks
- Pier Blocks
- Burner Tiles & Burner Blocks
- Custom Shapes to Specification
- Integrated Anchors & Lifting Lugs

MODULES & CUTTING

Ceramic fibre products provide efficient heat storage and energy saving furnace linings. Combined with our precision cutting services, we deliver tailored solutions to exact specifications.

MODULES & VENEERS

HIGH TEMPERATURE INSULATION

Ceramic fibre products provide a very efficient heat storage and energy saving method of lining for a variety of furnace applications, eliminating the need for dense refractory and reducing installation times.

Our Modules and Veneers are manufactured from various grades of ceramic fibre blanket and low bio persistent fibres depending on application requirements, up to 1600°C in service rating. Modules are supplied in either convoluted or stack bonded blanket construction, available as singles (300mm) or doubles (600mm). All fixings and fastenings are manufactured from 304 S/S.

The method of fitting to the furnace casing depends on the application. Standard attachment is by pre drilling the casing and fixing the bracket with a threaded stud assembly or self tapping screw (techscrew). Alternatively, studs can be welded to the casing at predetermined centres and the Modules bolted to the studs using the guide insert built into the Module. Installation service available on request.

BRICK & TILE CUTTING

PRECISION CUTTING SERVICE

We offer a brick, block and tile cutting service at our works, from insulation grade firebricks to high alumina firebricks, to tight tolerances. We can supply the bricks for cutting, or you can supply your own.



DUCTING & DAMPERS

Full lining installation service for customer supplied fabrications, using either your own lining specifications or our recommended material specifications.

100%

CUSTOM FIT

UK

INSTALLATION

1600°C

RATED LININGS



FLEXIBLE SPECIFICATION

LINING SOLUTIONS TO YOUR EXACT REQUIREMENTS

JIC Refractory Products Ltd offer a service to install linings to Ducting and Dampers to customer supplied fabrications, using either customer lining specifications or our own recommended specifications.

Typical specifications include 1260 grade Ceramic Fibre Board with 304 S/S Twistlock Pins and Speedfix Washers, with variations to suit the specific operating environment and abrasion profile.

INSTALLATION SERVICES

Specialist design, installation and maintenance of all types of furnaces, ovens, kilns and incinerators. A dedicated team of trained supervisors, full time bricklayers, installers and gunning teams delivering reliable and quality workmanship across the UK.

Our customers benefit from many years of experience within various refractory industries. The company offers top quality services at very competitive prices to meet the customers' requirements. Our strength and success lies in the ability to offer reliable and quality workmanship.

We also offer onsite inspections to generate accurate proposals for your construction projects. Based on your specific process needs, we can assist you in refractory material selection in accordance with your specifications.



WHAT WE INSTALL

- Firebrick
- Vibrocast, pumpable and gunite monolithic refractory concretes
- Ramables and Mouldables
- Insulation firebricks and concretes
- Insulating boards and fibres
- High temperature, low thermal mass insulations
- Metallic anchorage systems



OUR SERVICES INCLUDE

- Site inspections, if required
- Rapid response 24/7 call out to reduce down time
- Demolition of existing linings
- Repairs to existing linings or complete new builds
- Undertaking very small jobs to large projects
- Excellent customer liaison & safety performance
- Experienced supervision & technical support
- Project planning & design using latest 3D and CFD
- All work guaranteed
- Maintenance plans, procedures & dryout schedules
- COSHH and RAMS provided

INSTALLATION EXAMPLES

A selection of recent installation projects showing the breadth of lining configurations, material specifications and industry applications JIC regularly delivers.



PREHEAT FURNACE WALKING BEAM

CONSTRUCTION

- Calcium Silicate Slab 1000GD
- CF Blanket 1260GD 128kg
- Insulation Brick 23 grade IFB
- Walking Beam Charge End blocks precast in SIFCA
- Walking Beam blocks precast in 1700°C grade, Low Cement, Abrasion and Thermal Shock Resistant Castable + 3% 310 S/S fibres



TEST RIG

CONSTRUCTION

- Insulation Brick 26 grade
- Port blocks precast in 1700°C grade, Low Cement, Abrasion and Thermal Shock Resistant Castable
- Roof 300mm 1260/170 grade Ceramic Fibre Modules



REHEAT FURNACE DOOR

CONSTRUCTION

- 1400/170 grade Low Thermal Mass Modules
- 1260/128 grade Body Soluble Blanket
- 304 S/S Fixings
- Rigidiser



WASTE INCINERATOR

CONSTRUCTION

- Dense 42% Alumina Firebrick
- Insulation Brick 23 grade IFB
- 1700°C grade, Low Cement, Abrasion, Chemical and Thermal Shock Resistant Castable
- Silicon Carbide Precast Blocks
- Mediumweight Insulation Castable
- Calcium Silicate Slab 1000GD
- Ceramic Fibre Blanket and Rope

PROJECT PORTFOLIO

From waste to energy boilers and cremator builds to flue lagging and ducting installations, our team delivers across every major industrial furnace application.



WASTE TO ENERGY BOILER

CONSTRUCTION

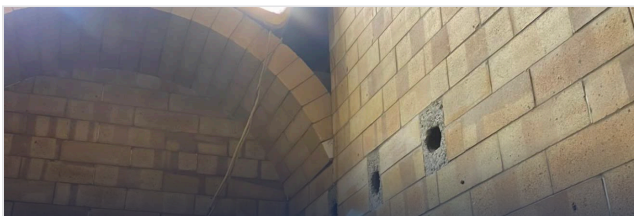
- Dense 60% Alumina Firebrick
- Silicon Carbide, Abrasion Resistant Castable
- 1600°C grade, Low Cement, Alkali, Abrasion and Thermal Shock Resistant Castable
- Calcium Silicate Slab 1000GD
- Ceramic Fibre Paper



CREMATORS

CONSTRUCTION

- Dense 42% Alumina Firebrick
- 60% Alumina Tiles
- Insulation Brick 23 grade IFB
- 1600°C grade, Low Cement, Thermal Shock Resistant Castable
- Lightweight Insulation Castable
- 1260 Grade Ceramic Fibre Board
- Ceramic Fibre Blanket and Rope



FLUE LAGGING

CONSTRUCTION

- 1260/128 grade Ceramic Fibre Blanket
- 304 S/S Twistlock Pins
- Cuplock Fixings



DUCTING

CONSTRUCTION

- 1260 grade Ceramic Fibre Board
- 304 S/S Twistlock Pins and Speedfix Washers

FURNACE DESIGN & ENGINEERING.

With over 30 years' experience working in the furnace refractory lining industry, we offer our expertise in the design of suitable wear linings, insulation, expansion requirements and associated fixing and anchorage systems to meet the criteria required of your particular furnace needs.

In conjunction with our sales and installation of refractory products, JIC Refractory Products Ltd can assist you with refractory lining design. We calculate heat loss and theoretical shell temperatures for various lining configurations, and recommend materials, thicknesses and types of refractory anchors to suit your particular application.

We cover the Iron and Steel, non ferrous metals such as Aluminium and Copper, and non metal industries such as Incineration, Boiler, Petrochemical and Cremation industry sectors.

From either supplied specifications or site visits, we can assess and provide initial proposal designs, thermal profiles, CFD modelling, FEA, Bills of Materials and recommend the most cost effective solution through material and labour supplier sourcing.

If required, we provide installation drawings, recommended installation procedures, commissioning procedures such as curing and drying out, technical and COSHH datasheets and maintenance plans. Whatever the size of your project needs, we are willing to help.



CFD MODELLING

Computational fluid
dynamics analysis



FEA ANALYSIS

Finite element
engineering studies



3D DESIGN

Full 3D pattern
development



THERMAL PROFILES

Lining temperature
modelling

— GET IN TOUCH

LET'S BUILD SOMETHING THAT LASTS.

Speak to our team about your next project. From supply and design to full installation and maintenance, we're ready to help.

HEAD OFFICE

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REQUEST A FREE SITE SURVEY

NO OBLIGATION, UK WIDE

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