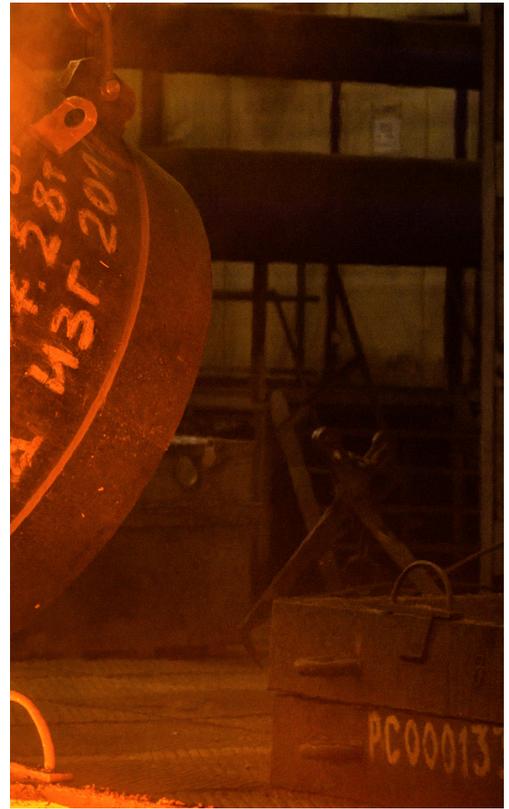
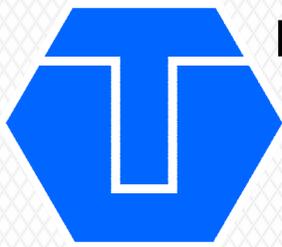


TENMAT

ADVANCED MATERIALS



HIGH TEMPERATURE PRODUCTS



TENMAT

ADVANCED MATERIALS

INNOVATION

SAFETY

TENMAT is a leading manufacturer of specialised, high performance engineering materials and components with over 100 years of experience.

SERVICE

TENMAT stands for innovation, safety products, commitment to our customers and the latest quality standards worldwide.

QUALITY

A World of Materials

The diversified product range includes high temperature resistant materials, engineering ceramics, composite wear parts and bearings, passive fire protection solutions and hard metals.

Commitment to Quality

TENMAT operates an ISO 9001:2008 Quality Management System for the design, development and manufacture of specialized high performance engineering materials and components.



HIGH TEMPERATURE MATERIALS

TENMAT High Temperature Materials are recognised as world leaders in their industries, providing undisputed performance in the most demanding of applications. From metal production to hot gas filtration, **TENMAT** manufactures materials of the highest quality, which improve the performance and efficiency of industry leading companies.

TENMAT High Temperature Materials offer considerable benefits in terms of performance, reliability, design and safety. **TENMAT** has been providing solutions to industry problems around the world for more than 100 years.

Benefits:

Metal Production

- Improving the efficiency of ferrous & non ferrous process industries through an array of thermal and electrical insulating materials.

Glass Industry

- Shot free roller covers allow for production of the highest quality glass.

Hot Gas Filtration

- Superior filters that offer cleaner emissions compared to any electrostatic precipitator or wet scrubber, as well as lower capital and operational costs.

Switchgear

- Excellent resistance to high energy arcs allows for the safe operation of advanced electrical power systems, for decade after decade.

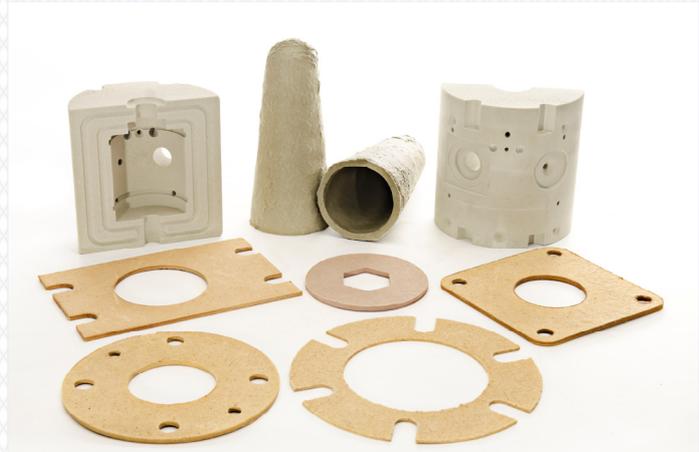


ALUMINIUM PRODUCTION

FIREFLY SINDANYO NITRASIL REFRAVER

Applications:

- Superstructure Insulators
- Crucible Back Up Insulation
- Tap Out Cones
- Syphon Gaskets
- Crust Breaker Insulators
- Thermocouple Sheaths
- Waste Gas Pipework Insulators
- Roller Covers



TENMAT materials are trusted by primary aluminium smelters worldwide, to provide the highest standard of performance and reliability. These materials are widely used by *Norsk Hydro*, *Rio Tinto Alcan*, *RUSAL*, *Alcoa*, *Alba*, *Pechiney* and many other aluminium smelter technology companies worldwide.

TENMAT is a global manufacturer of lightweight, non-combustible and strong products for the varied and challenging electrical and thermal insulation applications within the sector.

TENMAT offers a full portfolio of high-performance, asbestos-free products which work to improve efficiency, avoid downtime, reduce risk and drive business profitability.



GLASS PRODUCTION

FIREFLY

Applications:

- Annealing Lehr Roller Covers
- Gasketing & Thermal Insulation

TENMAT FIREFLY 800 millboard covered rollers are used in high quality glass production processes, such as float, flat, and vertical drawn. More recently **TENMAT** materials have also proven successful in demanding high volume thin glass production lines.



TENMAT has an outstanding track record in producing covered annealing lehr rollers with a life expectancy of typically 15 years or more. FIREFLY 800 does not mark the glass, avoids pick up of tin compounds, and is extremely long lasting.

Benefits:

- Improved Glass Quality
- No Marking of Glass
- No Pick Up of Tin Compounds
- Long Life (Decades of Life)
- Self Cleaning Properties
- Low Maintenance Costs
- Dimensionally Stable
- Insulating Behaviour Allows Constant Lehr Temperature
- Proven Performance



STEEL PRODUCTION

FIREFLY

FEROFORM

Applications:

- Roller Covers
(E.g. Roller Cladding for Annealing Process)

TENMAT, in collaboration with major steel works around the world, has engineered a solution to cover rollers that is able to withstand the high temperatures of this arduous application whilst improving the overall quality of the steel.



TENMAT rollers are dimensionally stable, tough, resilient, and provide long life, reducing the need for frequent and costly replacements.

FIREFLY 1125 cladding for steel rollers is made of a unique blend of high performance refractory fibres, designed to meet the extremely high temperature demands of the stainless steel industry.

Benefits:

- Durability
- No Marking of the Stainless Steel
- Longer Wear Life
- Lower Change Out Frequency
- Extreme Temperature Resistance
- Cost Effective



HOT GAS FILTRATION

FIREFLY

Applications:

- Waste Incineration Plants
- Crematoria
- Gasification Plants
- Metal Reclamation Plants



TENMAT Hot Gas Filter Elements are industry leaders and have shown to be significantly stronger than competitive materials, especially when operating at high temperatures. **TENMAT** Hot Gas Filter elements effectively filter both micron and sub micron particles.

TENMAT Hot Gas Filters are resistant to thermal shock, and are cleaned by conventional reverse gas pulse technologies. **TENMAT** filters can be used with a wide range of common reagents and sorbents to collect furans, dioxins, heavy metals and acids.

Benefits:

- Elements do not Tear
- Superior Resistance up to 1000°C
- 100% AES Fibres
- 100% Spark Proof
- >99.99% Filtration Efficiency
- Cleaner Emissions
- Unique Microstructure
- High Chemical Resistance



SWITCHGEAR

ARCLEX

SINDANYO

REFRAVER

Applications:

- Air Brake Circuit Breakers
- Arc Chutes
- Bus Bar Supports
- Side Protection Panels
- D.C. Switches



Around the world from Nuclear Power Stations to High Speed Train Systems, **TENMAT** materials are integral in controlling electrical arcs.

TENMAT ARCLEX, SINDANYO and REFRAVER materials are the leading asbestos-free materials on the market today. Designed to withstand the extremes of electrical and thermal environments for decades, these materials provide solutions for many of the harshest industrial applications.

These materials have been used in countries all around the world from Canada to Russia, UAE and France.

Benefits:

- Extinguish Electrical Arcs
- Excellent Electrical Insulation
- Excellent Thermal Insulation
- Low Moisture Absorption
- Resistant to Electrical & Thermal Shock
- Excellent Strength



OTHER INDUSTRIES

REFEL

Applications:

- Mechanical Seal Faces
- Shaft Seals
- Centrifuge Port Liners
- Decanter Flights
- Linings for Pipework for Extremely Abrasive Processes



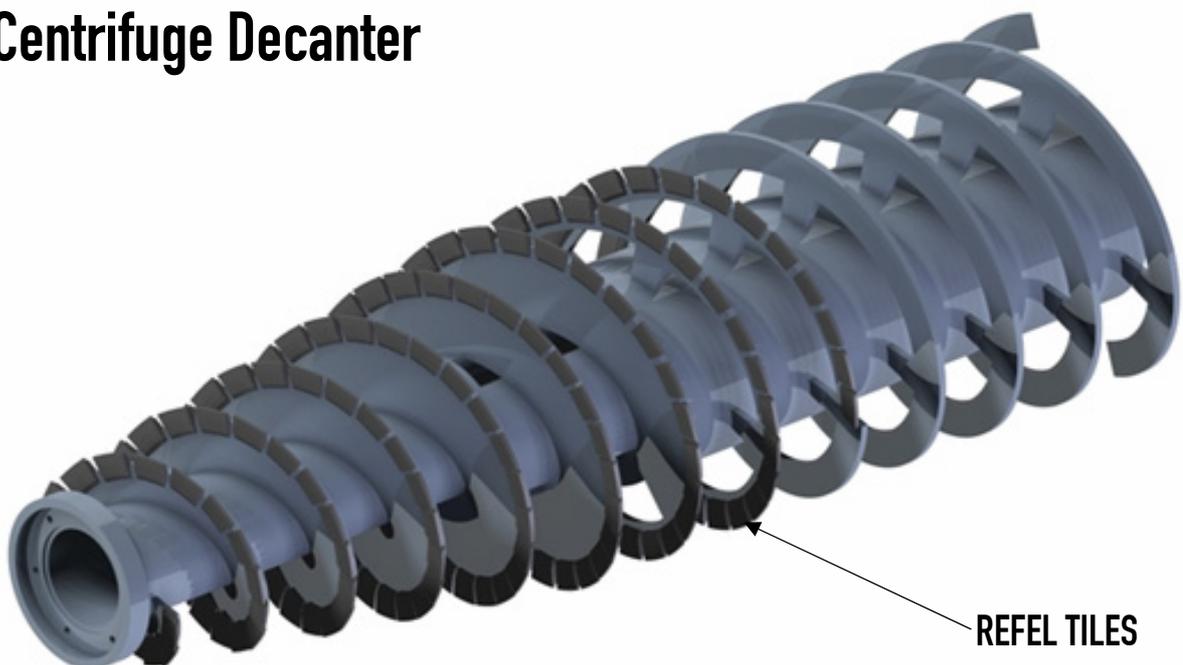
TENMAT has developed an engineered reaction bonded silicon carbide material which has successfully been integrated into advanced equipment throughout industry, meeting the needs of major players in several demanding market segments.

The microstructure of REFEL gives a superb interlocking bonding strength and surface quality. REFEL has a reputation for extreme performance and cost effectiveness.

Benefits:

- Fine Grained Microstructure
- High Wear Resistance
- Strength
- Lightweight
- Anti-corrosion Properties
- High Thermal Conductivity
- Thermal Shock Resistance
- High Performance

Centrifuge Decanter



HIGH PERFORMANCE PROJECTS



TENMAT High Temperature Materials have an industry wide reputation for providing the ultimate performance in the most extreme of environments.

This reputation for producing the ultimate performance materials is highlighted in the automotive industry. **TENMAT** has been providing its most formidable and robust ceramic coating to all of the brake discs in every McLaren P1 production supercar as well as the ultimate track focused driver's car, the P1 GTR.

TENMAT ceramic solutions have proven their ability to dissipate heat more efficiently than other competitor's products. It is this ability that allowed McLaren to produce a smaller brake disc, thus reducing weight and optimising performance characteristics of the car.



QUALITY & INNOVATION

TENMAT operates an ISO 9001:2008 Quality Management System for the design, development and manufacture of specialized high performance engineering materials and components.

TENMAT's ongoing commitment to the development of new products and solutions in the field of composite and engineering materials has been recognized in 2012 and 2013 by receiving the highest official award in Great Britain, the prestigious Queen's Award for Enterprise in the categories Innovation and International Trade.



AVAILABILITY

TENMAT High Temperature Materials are manufactured to the highest industry standards at **TENMAT's** own world leading manufacturing facility in Manchester, UK.

TENMAT High Temperature Materials are available in many standard sizes and custom shapes. Our Technical Services department is available to provide guidance on material selection, part design and technical solutions for individual enquiries.





FEROFORM **RAILKO** *FEROGLIDE* *FEROBIDE*

REFRAVER **REFEL** **ARCLEX**

FIREFLY **NITRASIL** **SINDANYO**

TENMAT is committed to the highest standards in customer service and our international staff is looking forward to assist you.

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