



TENMAT

ADVANCED MATERIALS



HIGH TEMPERATURE ROLLER MATERIAL



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INNOVATION

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

SAFETY

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, composite wear parts and bearings, engineering ceramics, high temperature resistant materials, and passive fire protection solutions.

Commitment to Quality

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



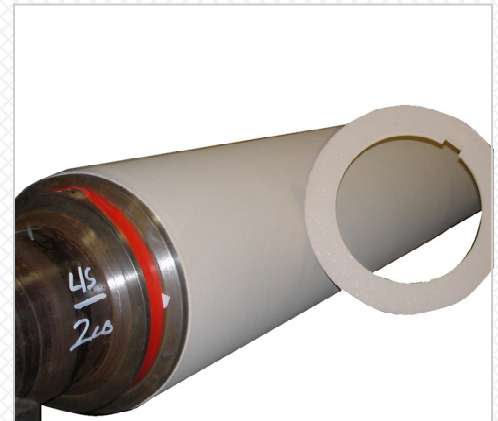
HIGH TEMPERATURE ROLLERS

TENMAT's range of high temperature materials include world renowned composites including FIREFLY and FEROFORM®. **TENMAT's** roll cladding materials are tailored to give outstanding performance in the most arduous environments, such as glass, steel, and aluminium plants.

FIREFLY 800

TENMAT's range of high performance millboards include FIREFLY 800, a high purity, shot free material made with the most advanced extreme temperature resistant exonerated fibres.

This shot free material is ideal for covering lehr rollers used in the glass industry.



FEROFORM

TENMAT's proprietary composite material FEROFORM F57 consists of a friction modified, cured phenolic resin matrix, reinforced with high performance and impact resistant Kevlar.

FEROFORM F57 is used in a wide variety of high temperature applications, including rollers for aluminium hot rolling mills.

FIREFLY 1125

FIREFLY 1125 responds to the need of having an abrasion resistant cover which is tough, yet gentle to the steel strip.

Only the highest quality mineral fibres are used to manufacture this top of the line refractory material.

Steel works around the world are benefiting from using FIREFLY roller covering.





GLASS ROLLERS

TENMAT FIREFLY 800 millboard glass roll covering was developed over 25 years ago specifically to replace asbestos roll cladding materials in the float glass industry.

FIREFLY 800 millboard covered rollers are used in high quality glass production processes, such as float, flat, and vertical drawn.

More recently **TENMAT** material has proven successful also 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.

The advantages of **TENMAT** FIREFLY 800 roller claddings include:

- Improved glass quality
- No marking of glass
- No pick up of tin compounds
- Long Life
- Self cleaning properties
- Lower maintenance costs
- Dimensionally stable
- Insulating behaviour allows constant lehr temperature



TENMAT FIREFLY 800 millboard is supplied as cut-to-size rings, and finished rollers.





ALUMINIUM ROLLERS

As an expert in the manufacturing of advanced composites, **TENMAT** developed a unique blend of high performance fibres to build an extremely tough and resilient material for the aluminium industry.

FEROFORM F57 is the ideal choice for high impact applications, providing a long-lasting, maintenance free wear surface.

This innovative material replaces old-fashioned steel rollers, which are infamous for scratching the delicate surface of the aluminium.

In modern aluminium hot rolling mills, the quality of rolled aluminium is critical for successful use in applications ranging from aerospace to pharmaceutical. The surface finish of the rolled aluminium is dependent on the rollers. FEROFORM F57 covered rollers provide a durable, high temperature surface that protects the aluminium during the hot rolling process.

The advantages of FEROFORM F57 include:

- No marking of the aluminium
- No pick up of contaminants
- Maintenance free – no roller cleaning
- Long life
- High impact strength
- Easy fit – simple replacement of steel rollers



FEROFORM F57 is successfully used by major aluminium manufacturers around the world, eliminating the need for grinding and regular cleaning of the production lines.

TENMAT FEROFORM F57 can be processed around your existing steel rollers.

Alternatively we supply stand alone full or split sleeves that simply slide onto your steel mandrel. Other applications for FEROFORM F57 in aluminium plants include sliding pads, bearings, and thrust washers.





STEEL ROLLERS

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.

Red hot stainless steel requires special handling to avoid surface imperfections during the production of continuous strips.

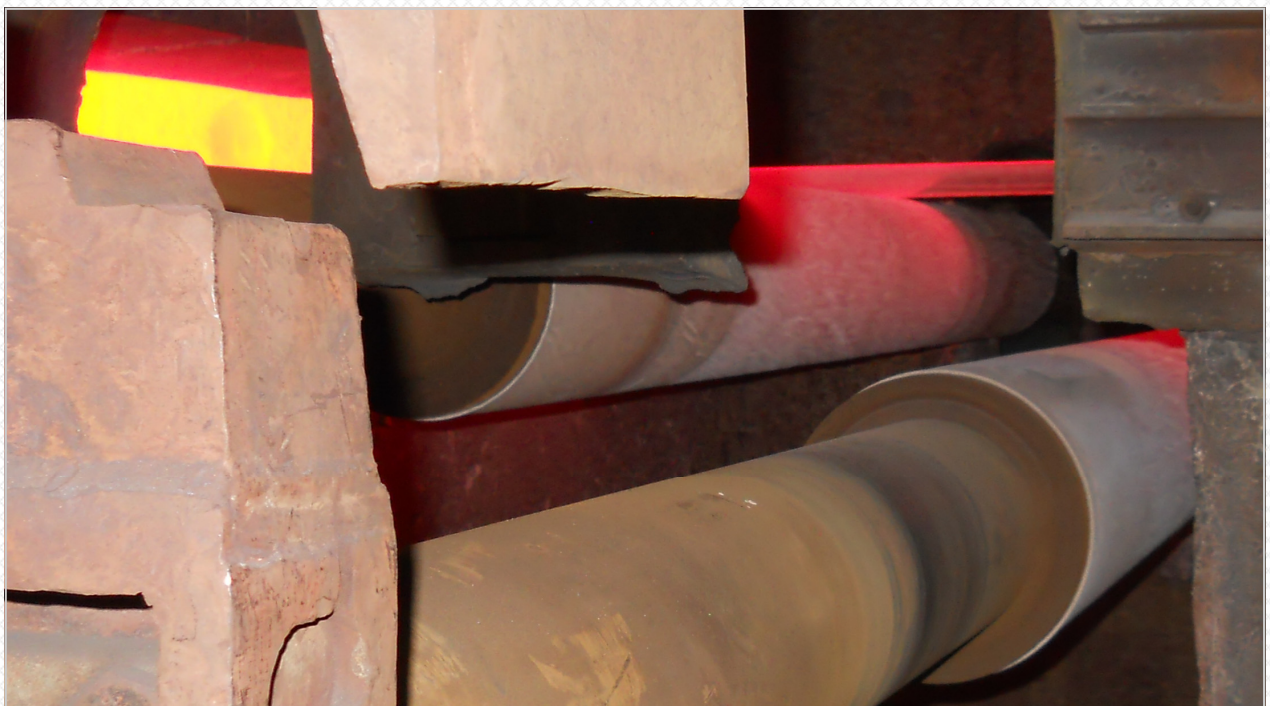
TENMAT in collaboration with major steel works around the world has engineered a solution to cover rollers, that is able to withstand the high temperatures of this arduous application and improving the overall quality of the steel.

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

The advantages of rollers covered with FIREFLY 1125 include:

- Durability
- No marking of the stainless steel
- Longer wear life
- Lower change out frequency
- Extreme temperature resistance
- Cost effective

TENMAT FIREFLY 1125 materials is supplied in sheets, and cut-to-size rings, ready to be installed onto existing rollers.





**THE QUEEN'S AWARDS
FOR ENTERPRISE:
INNOVATION
2012**



**THE QUEEN'S AWARDS
FOR ENTERPRISE
INTERNATIONAL TRADE
2013**

LEADERS IN INNOVATION

TENMAT's ongoing commitment to the development of new products and solutions in the field of composite and engineering materials has been recognised 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.

Custom Component Manufacture

TENMAT materials can be supplied as semi-finished products or, if required by the customer, our ISO9001-2008 certified machine shop can produce fully machined items to specification.

Materials Expertise

With over 100 years of experience in Composite Engineering Materials, **TENMAT** offers customers information on material developments, characteristics, suitability, and applications.

Technical Ingenuity

TENMAT has been proven to consistently produce industry leading advanced composites, developed in our in-house R&D Technical Laboratories.

Problem Solvers

The diverse range of high performance composite materials manufactured by **TENMAT**, offer the engineer a wide array of solutions to improve wear resistance, withstand extreme temperatures, resist high impacts, and survive in harsh, corrosive environments. Our Technical Services department is available to provide guidance on material selection, part design and technical solutions.

Component Design

If design services, drawings and fitting instructions are required, **TENMAT** will work with customers in developing the most suitable solution to their particular problem.



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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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