

# PBI Activities – High temperature Innovative solutions producer

Our strength is that we specialize in protection, sealing and insulation solutions for a wide range of industries:

## <u>Steel</u>

**Innovative** high temperature solutions at different stages of the metallurgy and foundry industry process: melting furnace, cast iron, continuous steel casting, metal treatment, coke plants, etc.



Our goal is to optimize the security of your workers, machines and tools at various stages of the steel, foundry and metallurgy industry process.

In addition to this, we also optimize your manufacturing process:

- Steelmaking
- Casting
- --- Semi finished products

→ Transformation into finished products

Anti-spatter protection



### **Casting gaskets**



Ladle back-up insulation



## <u>Aluminium</u>

All aluminium processes require the use of high temperatures and need to be handled with care to protect both workers and equipment, as well as minimize waste.

**PBI** offers you the most appropriate custom-made solutions, preserving optimal temperatures during critical phases of production and transformation.

#### Welding curtain protection



#### Ladle cap gaskets





# Petrochemical industry : Protection of tube systems – Thermocouple

As with any other heavy industry, petrochemical processes require state of the art solutions in order to protect equipment inside furnaces (tubes, thermocouples, etc.) from high temperature and chemical aggressions.

Our Nefatex 1200 and Nefatex 1390 can be the basis for custom made solutions taking into consideration all aspects of the process in order to increase equipment lifetime and reduce maintenance.

#### Protection of tube systems (harps)

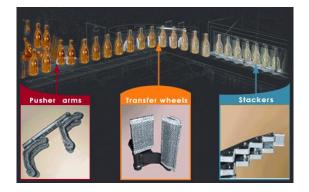


#### Thermocouple protection



# **Glass high temperature - Glass temperature transition - thermal shock**

During the production process, glass is stressed and its skin is subjected to considerable thermal shock. There is a risk of disturbance during contact with pusher hands, transfer wheels and stacker bars. Why not try an optimization already adopted by the large majority of glass manufacturers?



# Furnace rolls - Production of millboard rings

Production of millboard rings





# Centrifugal casting - Millboard Rings

When providing gaskets for the main centrifugal casting plants throughout the world (France, Germany, Spain, India, Brazil, etc.) our priority is security and no burrs.

For more than 20 years we have followed the developments in our customer processes and we offer a range of vertical and horizontal centrifugal casting solutions.



# Heat shields - Heat insulation shield

To meet your needs as much as possible, we study the most appropriate means of insulation.

Our capacity to work to measure is a real strength and means that we can provide you with heat shield solutions that are easy to install and highly resistant to abrasion.

#### Heat shields

Valve heat insulation





Exhaust wrap insulation





المصرية للهندسة الهيدروليكية م/ سامع محمر زياوة

# High temperature solutions & products

## High Temperature Millboards and Gaskets

A wide range of **non-asbestos millboards and gaskets**, with specific features (ceramic-free, waterproof, graphite, etc.), dedicated to precise application temperatures and with specific mechanical properties.

## Textile and Tailor made products

Different types of **high temperature fibres and yarns** made with glass, aramid, HT-Glass, ceramic, etc., especially for made-tomeasure textile products, according to your specific requirements.

# **Glass contact products**

**Innovative and soft glass contact solutions** for each step of the production process: braids, tapes or tubings for handling tools, stacker bars, pusher arms, fingers, sabres and stabilizing devices as well as spiral-wound lining. A complete range with technical features, available in several formats.

## **Techeat Solutions**

All new applications with **revolutionary materials** and **new challenges** for our R&D department: developing a formula perfectly adapted to your needs and creating the **innovations of tomorrow**.



High temperature gaskets and millboards

- Millboards
- Paper
- Furnace rolls
- Millboard workshop

### The world's leading producer of non-asbestos millboard



Our **millboards** are obtained through a paper mill process combining different sorts of **mineral fibres** with fillers.

With **the largest existing range of high temperature millboards** <u>UP TO 1500°C</u> we should have your solution. If we do not, **we can quickly develop specific formulas** to meet your requirements.



# Textile, custom-made products - high temperature resistant fibres



# Textile and Custom-Made products

Our textile and custom made items are produced following customer specifications and drawings, or after visiting the production site.

Our complete textile range is braided or woven with high temperature resistant fibres.

#### Main references: Twisted cord Braid Braid Braid Rope lagging Knitted braid Braid

#### Our textile range offers several grades



# Glass contact products - Soft glass contact



Main references:		Handling tools	Stacker bar	Hands for pusher arms and transfer wheels	Fingers, sabre, stabilizing device,	Spiral- wound lining	Technical remarks
and the second second	Braid TSA 21	Х	0	0	Х	0	-
	Braid LPA3	Х	0	0	Х	0	-
	Tape LPA3	0	Х	Х	0	0	-
	Tubing LPA3	Х	0	0	Х	0	-
	Square braid LPA3	0	0	0	Х	Х	Also available with metallic edges
	Tape Nefaglass S	О	х	х	0	0	Also available with metallic velcro
	Tape Nefaglass SO	0	х	х	0	0	"WELDABLE"
	Tubing 316 SO	Х	0	0	Х	0	"WELDABLE"
	Square braid 316 SO	Х	х	Х	х	х	"WELDABLE"
	Vacum pads	-	-	-	-	-	-

X: Compatible O: Compatible depending on the application

EGYPTIAN HYDRAULIC ENGINEERING Eng. Sameh Xeyada



# **PBI - High temperature solution producer**

- Dedicated resources
- Products and solutions





Always ready to find adapted solutions to your highly specific requests, our R&D, engineers and factory work together with you to find a solution. Thanks to the combination of these dedicated resources and our production flexibility, our laboratory can sometimes produce a first proposal within 24 hours!



## Products and solutions

We have also developed many innovative products, which serve as bases to solutions:

- TECHEAT® BRAID TS11 : High temperature braid showing following characteristics that have been much improved vs traditional products : sealing under pressure / depression and compressibility / elastic recovery.
- TECHEAT® BRAID T29 : True 1200°C braid free of ceramic fibers and binder, with very good resistance to flame, thermic and mechanic shocks.
- ROC® coating: customized coating to reduce fibre dispersion, metal projection adherence and increase resistance to abrasion
- <u>NEFATEX®</u> <u>1200°C</u> and <u>1390°C</u>: for thermal, mechanical and chemical associated stresses up to 1390°C.
- **NEFEX®**: complete range of active materials including expandable components for smart seals