



INTRODUCTION OF LINCO BAXO GROUP

REHEATING & FORGING FURNACES



TEC REF

KERO



www.lincobaxo.com

Group core business

Development, Manufacture, Procurement, Supply and Sales of Dense and Insulating Refractory Products Containing Alumina, Alumino-Silicates, Silicon Carbide, Zircon, Chromite, Magnesite and Graphitic Materials, in both Unshaped (Monolithics) and Shaped (Dry Pressed, Extruded, Slip Cast, Pre-Cast) Forms.

On the background of seventy years experience, we aim to cover supply contracts of refractories, engineering and installation with a large number of valuable customers we corporate regularly with.



ISO 9001 since 1993

Organisation & Numbers

- Corporate HQ in Milan (Italy).
- Registered capital Eur 5.164.600.
- Company established in 1949.
- Same family ownership since inception.
- SME (Small Medium Size Enterprise).
- 5 factories (4 in Italy , 1 in The Netherlands).
- 250 employees of more than 25 different nationalities.
- Comprehensive sale and technical organisation based on a worldwide network of subsidiaries, distributors, stockists and agents.
- Total combined yearly production about 100/110.000 tons.
- 2017 Group turnover Eur 52.160.000 (direct export 34.732.000).
- Thousand of satisfied customers.





Plant of Unshaped Refractories: Levate (Bg) - Italy

- Two modern production lines to manufacture unshaped refractories.
- Production line 1 is dedicated to manufacture light weight castables and is completed by two rotary furnaces to exfoliate vermiculite & perlite.
- Production line 2 is dedicated to manufacture dense castables, ramming mixes, mouldables & mortars.
- A complete modern central laboratory with all in-house equipment and a training center is complementing this factory.
- Yearly capacity production: 80.000 tons.

Our brands





Plant of Unshaped Refractories: Levate (Bg) – Italy





Plant of Unshaped Refractories: Levate (Bg) - Italy

Linco, Baxo, Kero, Sirma Unshaped products manufactured at this plant :

Refractory / Insulating castables	LICOFEST, BAXOCAST, SIRCAST, KEROCAST
Castables for gunning applications	LICOFEST TR, BAXOGUN, SIRGUN, PROMOGUN, PROGUN, KEROGUN
Service castables	LINAX, BAXOFIX, KEROMIX
LCC -ULC -FCC castables	LICOFEST PL, BAXOVIBRO, SIRBRATE, PROMOCAST, KEROVIB, SIRCHEM, ABROMIX
Fast firing castables	SIRQUICK, LICODRY
Shotcrete castables	KEROCRETE
Self flowing castables	KEROFLOW, SIRFLOW
Mouldable & ramming mixes	LICOCLAY, LICOTON, SIRPLAST, KERORAM
Dry vibratable mixes	KEROLAN
Dry, wet mortars & coatings	LICOTON MORTARS, BAXOPOL, BAXOCOAT, SIRCOL, COLLIGAN



Plant of Dense and Insulating Bricks

Bondeno (FE)- Italy

- Three tunnel kilns.
- Two shuttle kilns.
- Three tunnel dryers and many shuttle dryers.
- Many (> 10) modern hydraulic pressing machines to manufacture dry-pressed refractories.
- Two units to manufacture extruded insulating and refractory materials.
- Two vibrocast units to manufacture precast shapes.
- One in-house finishing plant to cut , grind & preassembly blocks to match tolerances to fine limits.
- Preassembly platform (850 sqm) equipped with bridge crane.
- Control laboratory.
- Yearly capacity production : 35.000 tons.

A complete range of metallic anchors in accordance with UOP, ASTM, API, EXXON, SHELL, TOTAL, etc...

Our Brands





Plant of Dense and Insulating Bricks

Bondeno (FE)- Italy



Our Brands





Plant of Dense and Insulating Bricks

Bondeno (FE)- Italy

Maref & Sirma range of shaped products manufactured at this plant :

Fireclay and high-alumina bricks and shapes	MAREF
Lightweight bricks and shapes	ISOM
Specialties for ceramic and brick industries	KERA
Specialties for glass industries	MAREF
High Alumina bricks for severe operations	SIRMA 95AT & 99AT
Presintered & sintered roof blocks system	LICOBLOCK



Plant of Precast Refractories & Specialties for glass - sanitaryware Zerbinato/Bondeno (FE) - Italy

- Two modern units to manufacture high-precision refractories for glass, ceramic and steel.
- Six high temperature kilns and many dryers.
- One comprehensive line for slip casting.
- One in-house finishing plant to cut, grind & preassembly blocks to match tolerances to fine limits.
- Preassembly platform (500 sqm) equipped with bridge crane.
- Yearly capacity production: 5.000 tons.

Our Brand

TEC REF
TECHNOLOGIES AND REFRACTORIES

Plant of Precast Refractories & Specialties for glass - sanitaryware Zerbinate/Bondeno (FE) - Italy





Plant of Precast Refractories & Specialties for glass - sanitaryware Zerbinato/Bondeno (FE) - Italy

Specialties manufactured at this plant :

Refractories based on alumina	REF - AL
Refractories based on mullite	REF - MUL
Refractories based on corundum	REF - COR
Refractories based on zircon	REF - ZIRCON

**All shapes are manufactured and itemized to customer needs.
We can manufacture and sinter blocks & shapes with a weight up to 16 tons.**



Linco Baxo Benelux B.V. Tilburg, The Netherlands

Linco Baxo Benelux bv is an international business distributing LINCO BAXO refractories in Nothe Europe . Thanks to strategically located warehouses in The Netherlands a wide range of products may be supplied at a very short notice.



Equipment:

- Wire bending machine C.N.C. three heads
- Wire bending machine C.N.C. four heads 360° rotation
- Automatic press 120 ton.
- Semi-automatic threading machine
- Semi-automatic welding station



Central Laboratory Levate (Bg) – Italy

- A modern laboratory to back-up the manufacturing facilities



Laboratory schedule of in-house tests

Test and examinations in compliance with ASTM - PRE – and EN Standards	
TRUE DENSITY and BULK DENSITY	STANDARD TEST METHODS FOR SIZE, DIMENSIONAL MEASUREMENTS, AND BULK DENSITY OF REFRACTORIES
WATER CONTENT	STANDARD TEST METHODS FOR SIEVE ANALYSIS AND WATER CONTENT OF REFRACTORY MATERIALS
X-RAY FLUORESCENCE (XRF)	ANALYSIS OF THE CHEMICAL COMPOSITION OF FINAL PRODUCT
SIEVE ANALISYS	STANDARD TEST METHODS FOR SIEVE ANALYSIS AND WATER CONTENT OF REFRACTORY MATERIALS
COLD CRUSHING STRENGTH (CCS) COLD MODULUS OF RUPTURE (CMOR)	STANDARD TEST METHODS FOR SIEVE ANALYSIS AND WATER CONTENT OF REFRACTORY MATERIALS
PERMANENT LINEAR CHANGE	STANDARD TEST METHOD FOR REHEAT CHANGE OF REFRACTORIES

Laboratory schedule of in-house tests

Test and examinations in compliance with ASTM - PRE – and EN Standards

POROSITY TEST	STANDARD TEST METHODS FOR APPARENT POROSITY, LIQUID ABSORPTION, APPARENT SPECIFIC GRAVITY, AND BULK DENSITY OF REFRACTORIES.
REFRACTORINESS UNDER LOAD (RUL)	STANDARD TEST METHOD OF MEASURING THERMAL EXPANSION AND CREEP OF REFRACTORIES UNDER LOAD
CREEP	STANDARD TEST METHOD OF MEASURING THERMAL EXPANSION AND CREEP OF REFRACTORIES UNDER LOAD
THERMAL CONDUCTIVITY	STANDARD TEST METHOD FOR THERMAL CONDUCTIVITY OF REFRACTORIES
ABRASION RESISTANCE	STANDARD TEST METHOD FOR ABRASION RESISTANCE OF REFRACTORY MATERIALS AT ROOM TEMPERATURE.

Laboratory schedule of in-house tests

Test and examinations in compliance with ASTM - PRE – and EN Standards

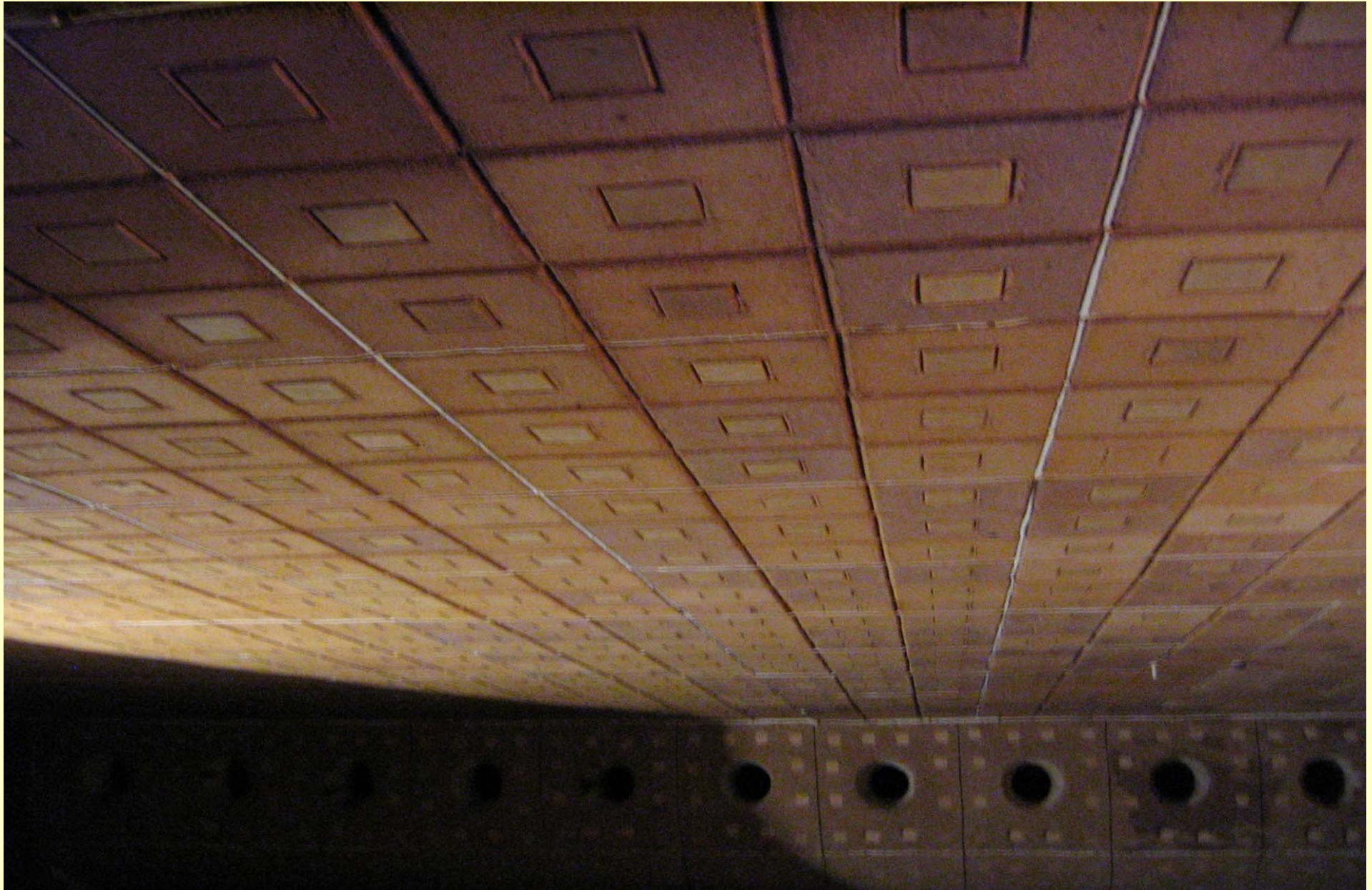
MODULUS OF RUPTURE AT ELEVATED TEMPERATURE (HMOR)	STANDARD TEST METHOD FOR MODULUS OF RUPTURE OF REFRACTORY MATERIALS AT ELEVATED TEMPERATURES
X-RAY DIFFRACTION (XRD)	MEASUREMENT OF THE MINERALOGICAL COMPOSITION OF THE MATERIAL.
Co RESISTANCE	STANDARD TEST METHOD FOR DISINTEGRATION OF REFRACTORIES IN AN ATMOSPHERE OF CARBON MONOXIDE

Our winning cards

- Competitive structure of prices.
- Immediate answers to your needs.
- Short delivery time.
- Committed and expert logistic team
- Comprehensive technical back-up.
- Post-sales assistance.
- Supervision on the field.



REHEATING & FORGING FURNACES



OVERVIEW OF APPLICATIONS



ROOF

LICO BLOCK
SYSTEM

LINCO BAXO
MONOLITHICS



HEARTH

LICO SHAPE
SYSTEM

LINCO BAXO
MONOLITHICS
CAST BLOCKS



SIDE WALLS

LICO BLOCK
SYSTEM

LINCO BAXO
MONOLITHICS



PRECAST

LICO SHAPE
SYSTEM

BURNER BLOCKS
ROLLER BLOCKS
HEARTH BLOCKS
BEAMS SHELLS
PIER BLOCKS

ROOF LICO BLOCK SYSTEM

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

- High alumina pressed blocks coupled with ceramic & stainless steel anchor systems for hot face lining in the heating & soaking areas.
- Extra light castable and insulating fibres provide the best insulation properties for heat loss reduction as back up lining.

	QUALITY	DESCRIPTION	
	LICO BLOCK 37 CH	PRE SHAPED BLOCKS	
	LICO BLOCK 39 CH	PRE SHAPED BLOCKS	
	LICOFEST L 05	LIGHT WEIGHT CASATABLE	
	MICROPOR	EXTRA LIGHT BOARD	

ROOF LINCO MONOLITHICS

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

- High alumina pumpable plastic castables and mouldables coupled with ceramic & stainless steel anchor systems for hot face lining in the heating & soaking areas.
- Extra light castable and insulating fibers provide the best insulation properties for heat loss reduction as back up lining.

	QUALITY	DESCRIPTION	
	LICOFEST 1600 0-10 QH BAXOPLAST 1700 LICO CLAY X 38	PREMIUM CASTABLES PLASTIC CASTABLE MOULDABLE	
	LICOFEST L05 LICOFEST 5V LICOFEST PC 124 I	LIGHT WEIGHT CASTABLE	
	LICOFEST 1600 0-10 QH BAXOPLAST 1700 LICO CLAY X 38		
	LICOFEST L05 LICOFEST 5V LICOFEST PC 124 I		






HEARTH LICO SHAPE

Refractory linings can be a daunting, expensive process when you consider the downtime, demo, installation and bake-out .Precast refractory shapes eliminate all these issues with significant costs saving.

Linco Baxo has developed a comprehensive range of precast products with high abrasion / erosion resistance such as :

REFAL – based on alumina – andalusite REFMUL – based on mullite
REFCOR /REFTAB – based on fused alumina / tabular alumina REFZIR– based on zircon

	QUALITY	DESCRIPTION	
HIGH ABRASION RESISTANCE	REF AL 66 LB	PRE SHAPED HEARTH BLOCKS	
	REF AL 67 VT	PRE SHAPED HEARTH BLOCKS	
	REF TAB 95	PRE SHAPED ZIRCON BASED HEARTH BLOCKS FOR SEVERE OPERATIONS	
	REF ZIR 30 HS	PRE SHAPED BLOCKS	

HEARTH LINCO MONOLITHICS

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

- High alumina ULCC , FCC HIGH ABRASION RESISTANCE coupled with tailored stainless steel anchor systems for all areas.
- Light weight castable and insulating fibers provide the best insulation properties for heat loss reduction as back up lining.

	QUALITY	DESCRIPTION	
	BAXOVIBRO VT 370	HIGH ABRASION RESISTANCE LCC	 
	BAXOVIBRO VT 820	HIGH STRENGHT ULCC ZIRCON BASED	
	BAXOVIBRO VT ZMX SUPER 0-10	HIGH STRENGHT ULCC	
	LICO DRY 65 QH	HIGH ABRASION RESISTANCE DRY CASTABLE FOR QUICK HEATING	

HEARTH LINCO SPECIALS

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

- High alumina ULCC , FCC HIGH ABRASION RESISTANCE coupled with tailored stainless steel anchor systems for all areas.
- Light weight castable and insulating fibers provide the best insulation properties for heat loss reduction as back up lining.

	QUALITY	DESCRIPTION	
	BAXOVIBRO VT 370	HIGH ABRASION RESISTANCE LCC HIGH RESISTANCE PRESHAPED BLOCKS	
	BAXOVIBRO VT 820	HIGH STRENGHT ULCC ZIRCON BASED	
	BAXOVIBRO VT ZMX SUPER 0-10	HIGH STRENGHT ULCC	
	LICO DRY 65 QH	HIGH ABRASION RESISTANCE DRY CASTABLE FOR QUICK HEATING	

HEARTH

CAST BLOCKS FOR SKID RAILS AND SOAKING ZONE BOTTOM

KERSKID, is based on pure oxides (Azs, Alumina, Chrome-Corundum) molten in an electric arc furnace.

The compactness of KERSKID and its structure limit the penetration of aggressive agents and, in the majority of cases, avoid slag sticking to the hearth. In the case of accidental build-up, KERSKID has the advantage of being easily cleaned, hot or cold, without suffering damage because of the weak adherence of the iron oxide.




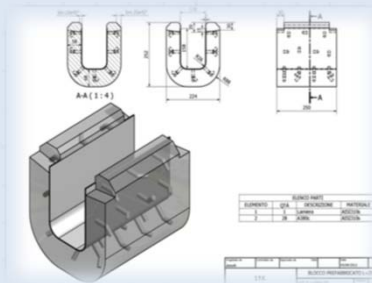
The KERSKID blocks are successfully used as skid rails and for soaking zone bottom of heavy duty ingot pusher-type furnaces (P.T.F.) and they can also be used as supporting elements of lining exit chutes in modern walking beam furnaces (W.B.F.). The main advantage of KERSKID is its resistance to mechanical stress in working conditions.

	QUALITY	DESCRIPTION	
	KERSKID 80 S KERSKID 80 V KERSKID 80 VF	ZIRCON BASED	
	KERSKID 94 KERSKID 98 KERSKID 88 CR	ALUMINA BASED	
	KERFIX (repair mix)	REPAIR MIXES BEDDING MIXES	
	LICOFEFEST 42 Z F (bedding mix)		

HEARTH BEAM SHELLS

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

A wide range of precast skids & beams shells is itemized and manufactured to the customers requirements. Refractory grades are based on andalusite, high alumina & bubble alumina.

	QUALITY	DESCRIPTION	
	REFAL 66 LB Density 2300 Kg/mc	REFRACTORY PRECAST SHELLS BASED ON ANDALUSITE	
	REFAL 67 VT Density 2300 Kg/mc	REFRACTORY PRECAST SHELLS BASED ON HIGH ALUMINA	
	REFCOR 95 L Density 1600 Kg/mc	INSULATING PRECAST SHELLS BASED ON BUBBLE ALUMINA	

WALLS

LINCO MONOLITHICS

Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

A wide range of precast skids & beams shells is itemized and manufactured to the customers requirements. Refractory grades are based on andalusite, high alumina & bubble alumina.

	QUALITY	DESCRIPTION	
	LICOFEEST 1600 0-10 QH BAXOPLAST 1700 LICO CLAY X 38	PREMIUM CASTABLES PLASTIC CASTABLE MOULDABLE	
	ISOM BRICK ALPOR BRICK	ASTM IFB	
	SILTHERM MICROPOR	EXTRA LIGHT BOARD	

WALLS

LICO SHAPE

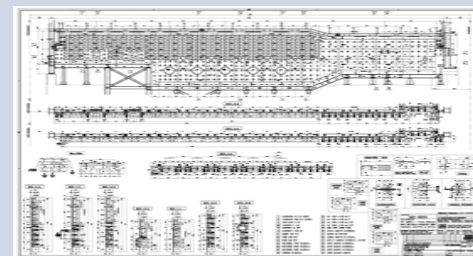
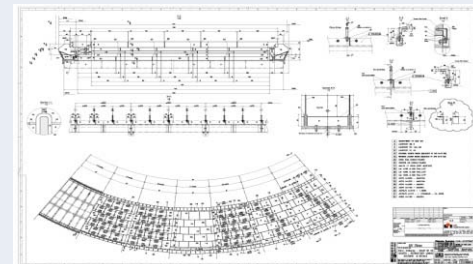
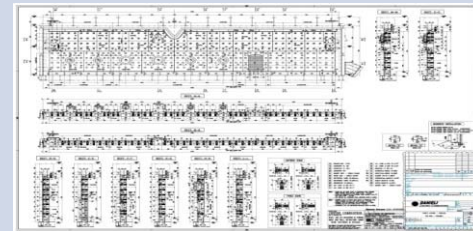
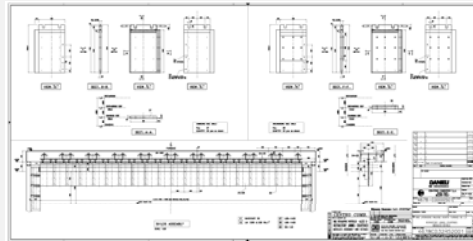
Reheating furnaces require high quality refractory products to secure a long service life time with the least possible maintenance shutdown.

A wide range of dry pressed blocks is itemized and manufactured to the customers requirements. Refractory grades are based on andalusite,bauxite, high alumina & bubble alumina.

	QUALITY	DESCRIPTION	
	<p>LICO BLOCK 37 CH</p> <p>LICO BLOCK 39 CH</p>	<p>DRY PRESSED BLOCKS</p>	
	<p>ISOM BRICK</p> <p>ALPOR BRICK</p> <p>LICOFEST L 08 C</p>	<p>ASTM IFB LIGHT WEIGHT CASTABLE</p>	
	<p>SILTHERM MICROPOR</p>	<p>EXTRA LIGHT BOARD</p>	

The engineering jobs and construction team, provide a full engineering package either for linings and casings, inclusive of heat flow calculation, bills of material, owner's manual as well as qualified supervision on site

- **Walking Beam Furnace WBF**
- **Walking Hearth Furnace WHF**
- **Pusher Type Furnace PTF**
- **Rotary Hearth Furnace RHF**
- **Roller Furnace RH**
- **Annealing Furnace AF**
- **Bogey Hearth Furnace BHF**
- **Forging Furnace FF**
- **Bell Furnace BF**



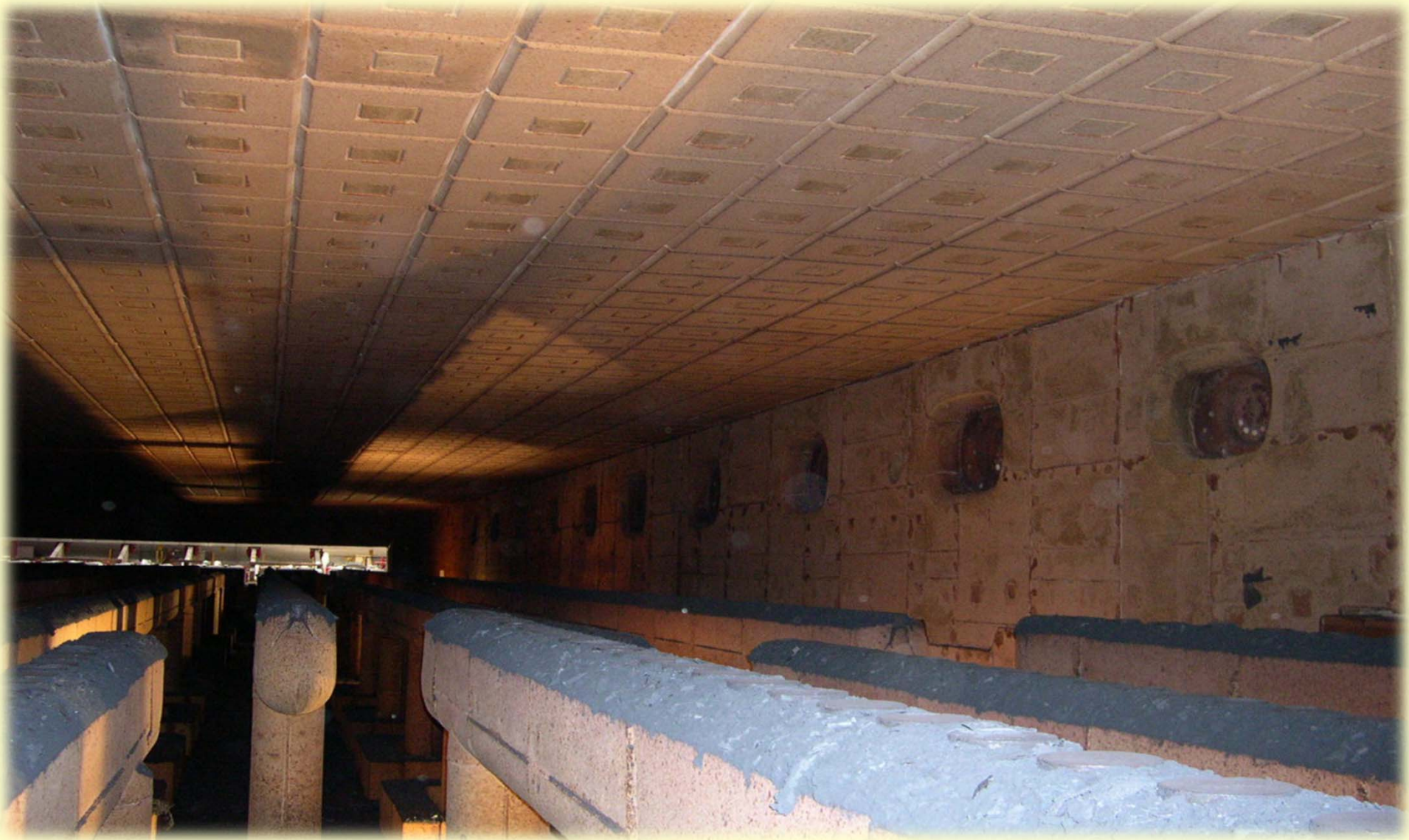
Site / Shop erections & contracting

- A department with experience in dismantling / installing refractory and insulating materials in heavy industries over the last 30 years. Cost efficiency, dedication to manual work and highly appreciated precision characterizes this outstanding operation.
- Support staff provides inspections, evaluating each job independently. Field-supervisors offer their practical know how in design and construction of refractory linings, tailored to customers need.
- Domestic and international contracts are managed in time, whether on scheduled or emergency shutdowns, from material disposal to manpower availability.
- Skilled personnel, using modern installation equipment, work with all common refractory and/or insulating materials available.



REHEATING & FORGING FURNACES

OVERVIEW OF PRODUCTS





A Complete Range of Monolithics

LICOFEST

Standard dense conventional castables Alumina SiC/ZrO₂

LINAX - BAXOMIX KEROFIX - KEROGUN LC

Service castables for trowelling, gunning and universal applications Alumina SiC/ZrO₂

LICOFEST L - FL

Light/medium weight castables Alumina

LICOFEST PL

Low cement thixotropic castables (LCC) Alumina SiC/ZrO₂

BAXOVIBRO

Thixotropic specialties (ULC-FCC) Alumina SiC/ZrO₂

LICO DRY

High Premium cement free castables Alumina SiC/ZrO₂

KEROVIB

Thixotropic mixes (ULC) Alumina SiC/ZrO₂

LICOTON

Ramming mixes Alumina SiC

LICO-CLAY

Plastic mouldables Alumina

BAXOGUN

Gunning mouldables Alumina SiC

KEROFLOW

Self-flowing mixes Alumina SiC

KEROLAN

Vibratable dry mixes Alumina SiC/MgO

KEROGUN M - KEROSEAL

Spraying, gunning and service MgO mixes

BAXOQUICK

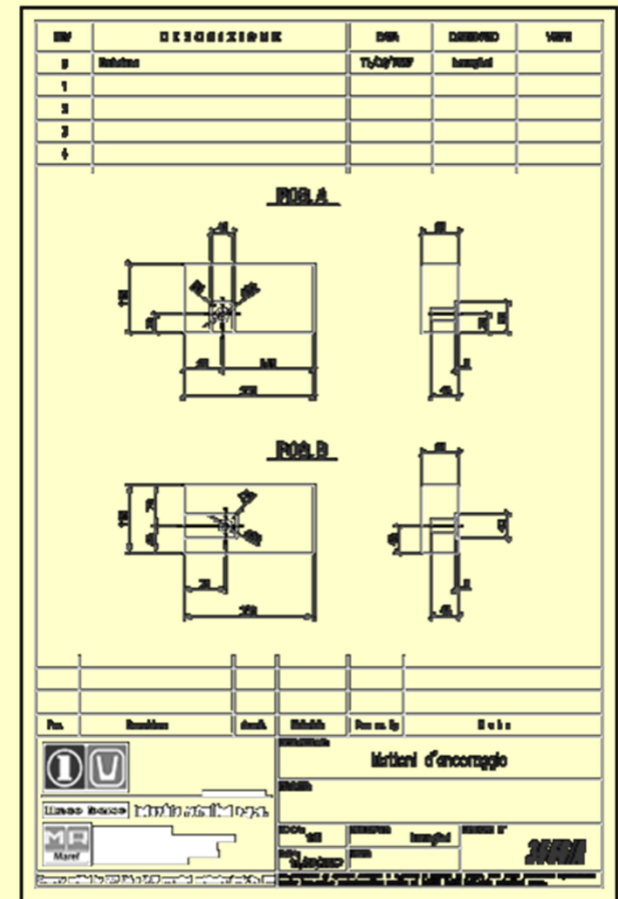
Sliding gate filler sands Cr₂O₃



A Complete Range of Mouldables and Mortars



A wide range of insulating shapes from ASTM 23 up to ASTM 33



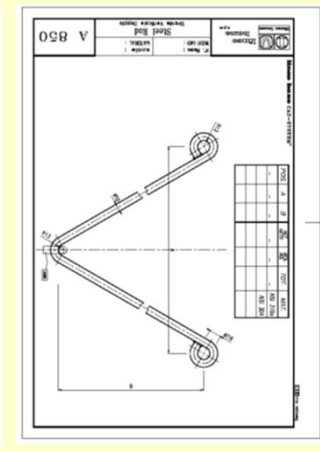
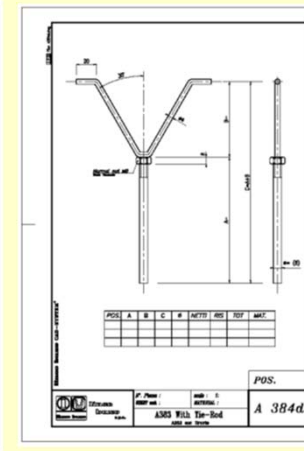
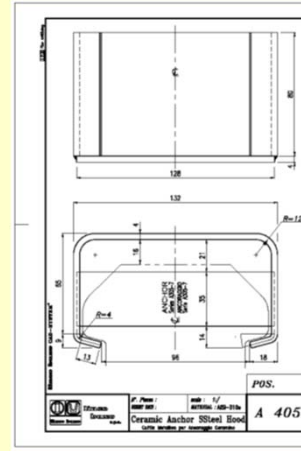
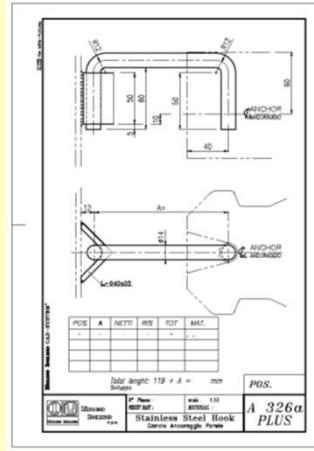
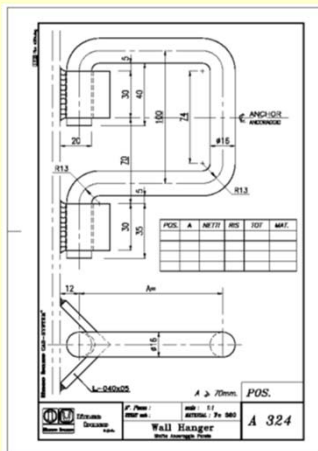
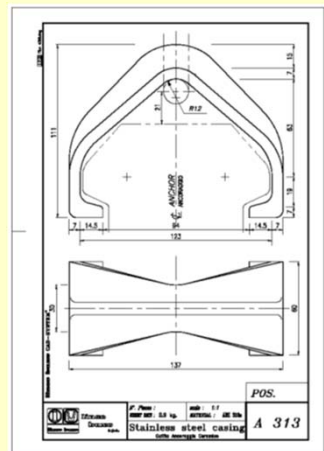
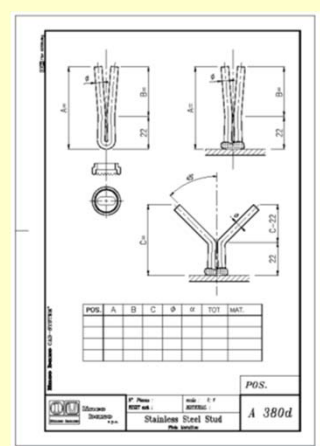
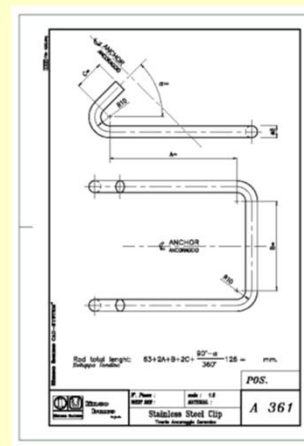
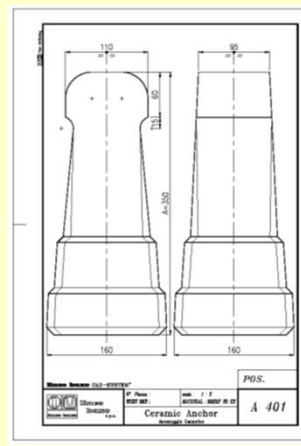
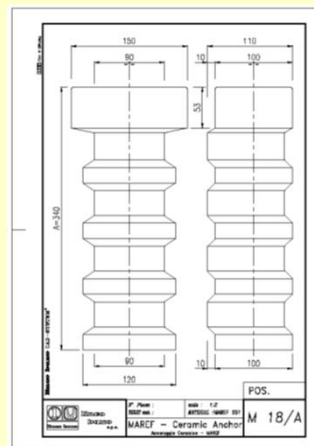
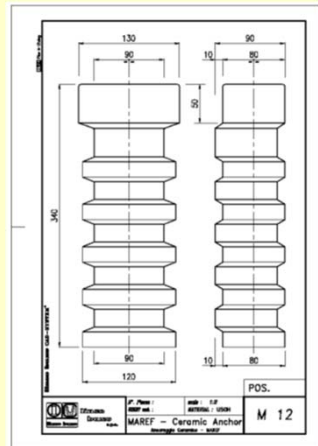
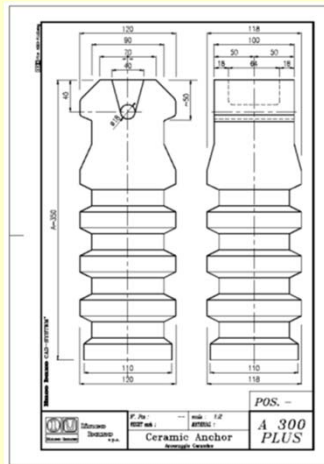
Ceramic & Soluble Fibres/Ancillaries



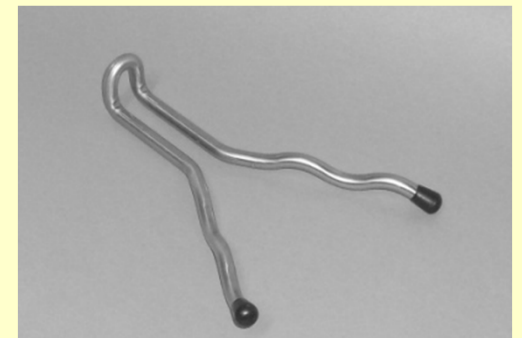
**BLANKETS
MODULES
BOARDS
MASTICS
COATINGS**



Ceramic & Stainless steel anchors



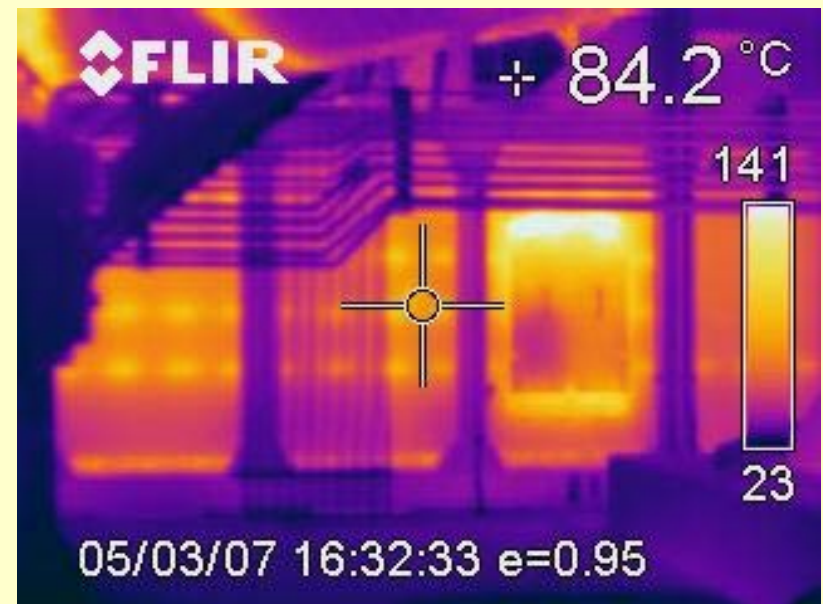
Ceramic & Stainless steel anchors



Thermography



A in-house service of THERMOGRAPHY is provided by our licensed technicians; this useful check allows to monitor the heat transfer flow and then to forecast the expected lifetime of the linings.





THANKS FOR YOUR ATTENTION

**This is only a presentation and we
are always delighted of a
prospective visit to our facilities**



TEC REF

KERO

