



INTRODUCTION OF LINCO BAXO GROUP

PETROCHEM



TEC REF



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 3.212.898,00
- Company established in 1949.
- Same family ownership since inception.
- SME (Small Medium Size Enterprise).
- 5 factories (4 in Italy , 1 in The Netherlands).
- 200 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 production capacity : 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 production capacity : 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 production capacity : 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.





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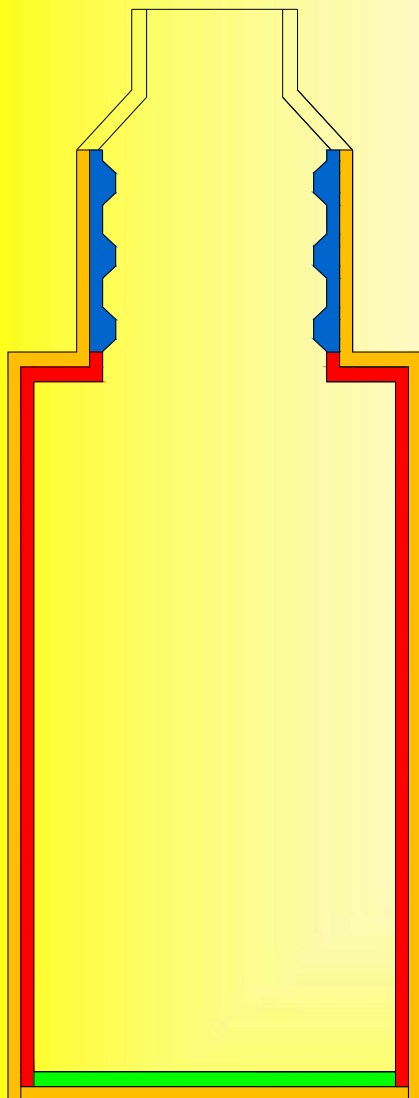
OVERVIEW OF APPLICATIONS



Process / Fired Heaters

Fired heaters require high quality insulating refractory products to secure a long service life time with the least possible maintenance shutdown. Worldwide renowned insulating materials such as:

- Insulating castables range LICOFESE and insulating firebricks ISOM for hot face lining in the combustion area.
- Insulating firebricks ISOM and insulating boards SILTHERM as back up lining.
- Ceramic fiber blankets LM / LM ECO as well as ceramic fibre modules L MOD / L MOD ECO in the convention area.

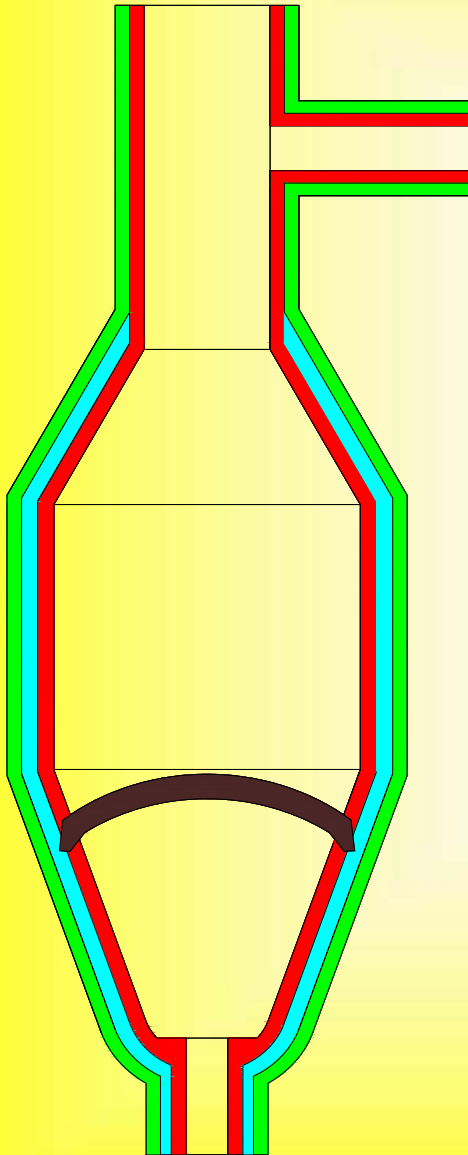


	QUALITY	Description
Red	LICOFESE PC 124 I	light weight insulating castables
	LICOFESE PC 124 CH	
Blue	LICOFESE LW 203 I	medium weight castables
	LICOFESE PC 123 I	
	LICOFESE PC 124 I	
	LICOFESE PC 124 CH	light weight insulating castables
	LICOFESE PC 124 I CB	
Green	LICOFESE PC 14 I	medium weight insulating castables
	LICOFESE LW 203 I	
	MAREF 45 Y	refractory bricks
	MAREF 42 C	
Orange	LICOFESE PC 106 I	light weight insulating castables
	LICOFESE PC 105	



Secondary ammonia reformers

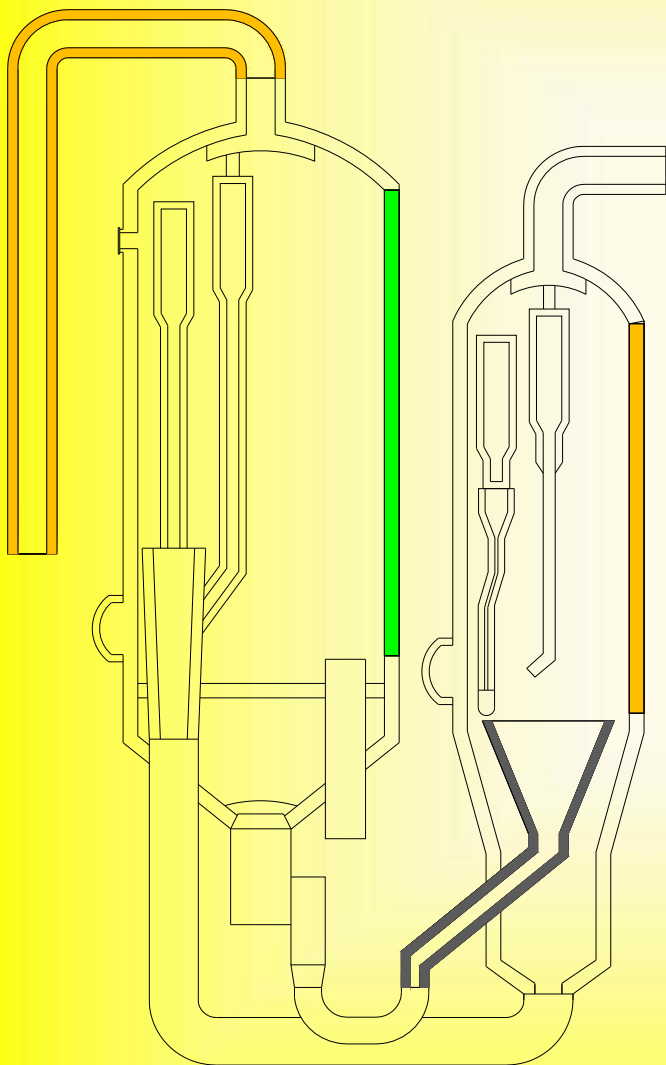
- The hydrogen rich atmosphere of the secondary reformer requires high purity refractory products in the hot face as well as insulating layers. All listed refractories are approved by the major engineering companies. High alumina bricks MAREF 95 AT, 99 & SIRMA 95 AT, 99 are devoted to the hot face from the burner down to the diffusor cone or the catalyst arch support. Castables LICOFEST H 195 C, LICOFEST H 197 C are suitable in the wall of middle sized vessels. Alumina bricks ISOM 30, 32, 33 are preferred as first insulating layer and LICOFEST MW 27 or LICOFEST LW 203 C as back up.



	QUALITY	Description
Red	MAREF 95 HKC	high alumina bricks
	MAREF 95 AT	
	LICOFEST H 195 C	dense refractory castables
	LICOFEST H 197 C	
Green	LICOFEST LW 202 MCB	medium weight castables
	LICOFEST LW 203 CB	
Light Blue	ISOM 30 - ISOM 32	insulating and light weight bricks
	ISOM 33	
Dark Blue	MAREF 95 AT	high alumina bricks
	MAREF 99	
Dark Blue	SIRMA 95 AT	high alumina bricks
	SIRMA 99	



Fluid catalytic cracking unit



- The toughest problem to solve in a FCCU is wear on the refractory lining. For the lining of cyclones and pipes inside reactors and regenerators high abrasion resistant castables such as ABROMIX range is required, usually installed on "hex mesh".
- A low cement content castable BAXOVIBRO VT 336 with SS needles has been developed for the riserpipe and standpipe lining. Medium weight insulating castable LICOFESE LW 203 C, LICOFESE LW 202 MCB are used for regenerator shell protection. The regenerator nozzles are reinforced with inserts in LICOFESE LW 203 C, LICOFESE LW 202 MCB.

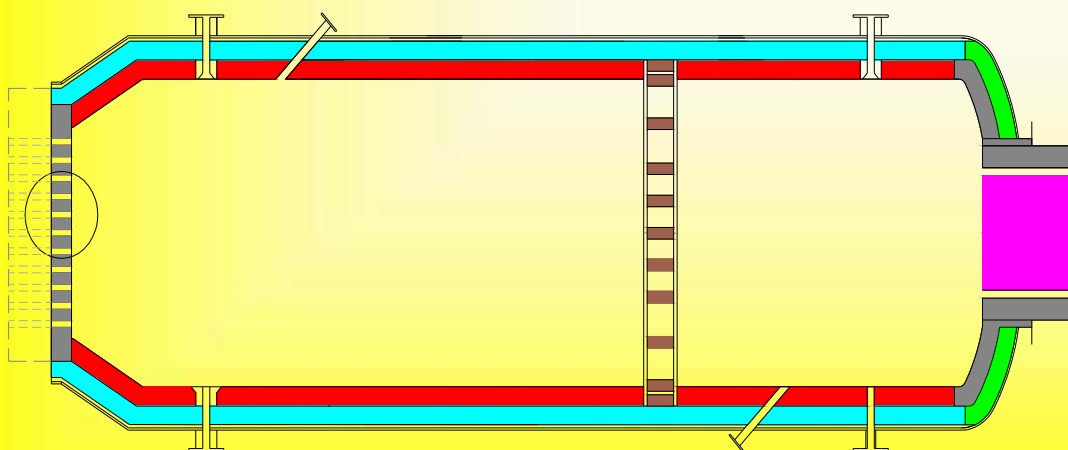
	QUALITY	Description
	ABRO MIX T	abrasion resistant castables
	LICOFESE LW 203 C LICOFESE LW 202 MCB	medium weight castables
	BAXOVIBRO VT 336 SS NEEDLES	low cement castables SS needles reinforcement





Sulphur recovery units

- Sulphur furnace is the most important part of the sulphur recovery unit where high temperature and gas corrosion require very pure refractory materials with low iron content. Bricks, plastics and monolithics based on tabular alumina and fused raw materials are used in the hot face. MAREF 95 AT & 99, SIRMA 95 AT & 99, LICOCLAY X 41, LICOCLAY X 415 and LICOVEST H 195 C, LICOVEST H 197 C, are usually selected for the first layer. Low iron content insulating firebricks ISOM 23,26,28,30,32 aim at reaching the correct shell temperature.

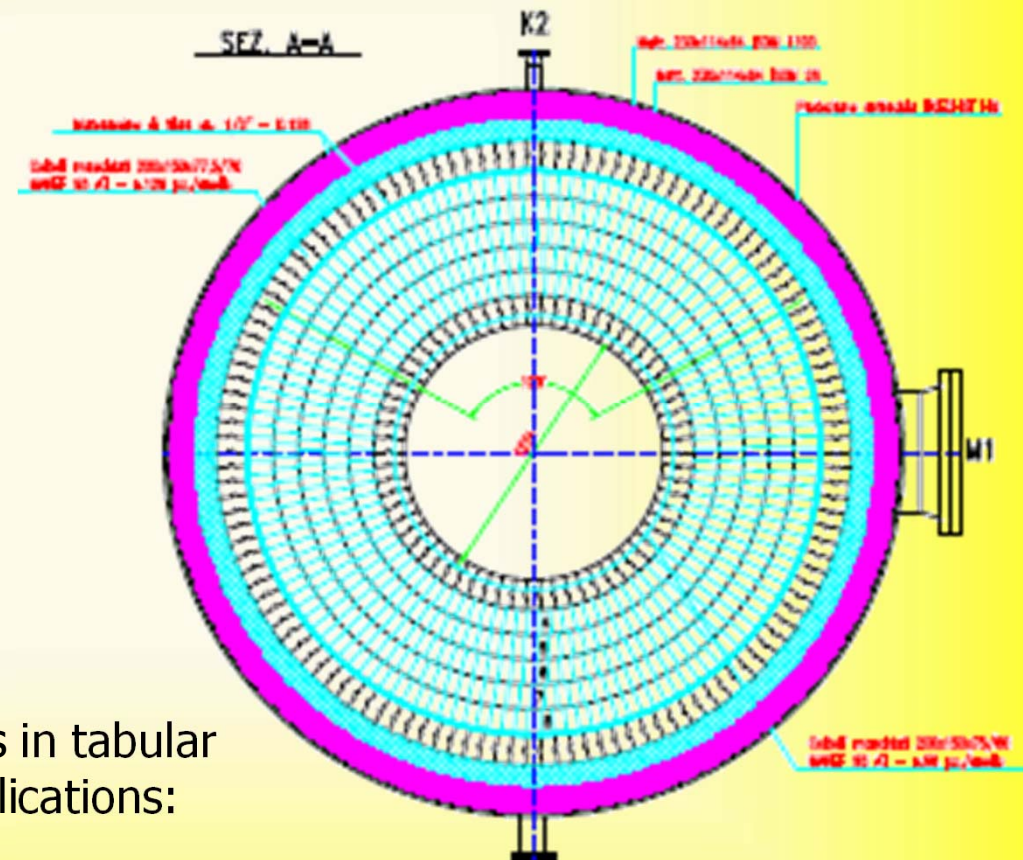


	QUALITY	Description
	MAREF 95 AT - MAREF 99 LICOVEST H195 C - LICOVEST H197 C	high alumina bricks dense refractory castables
	LICOCLAY X 41 - LICOCLAY X 415 LICOVEST H195 C - LICOVEST H197 C	plastic mouldables dense refractory castables
	LB FERRULES	technical ceramic
	SPECIAL BLOCKS MAREF 95 AT - MAREF 99	high alumina bricks
	ISOM 23 - ISOM 26 - ISOM 28 ISOM 30 - ISOM 32	insulating bricks
	LICOVEST LW 203 C LICOVEST MW 27	medium weight castables
	BURNER BLOCK SPECIAL SHAPES	precast shapes ²³

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OVERVIEW OF PRODUCTS





25

Mullit Bricks

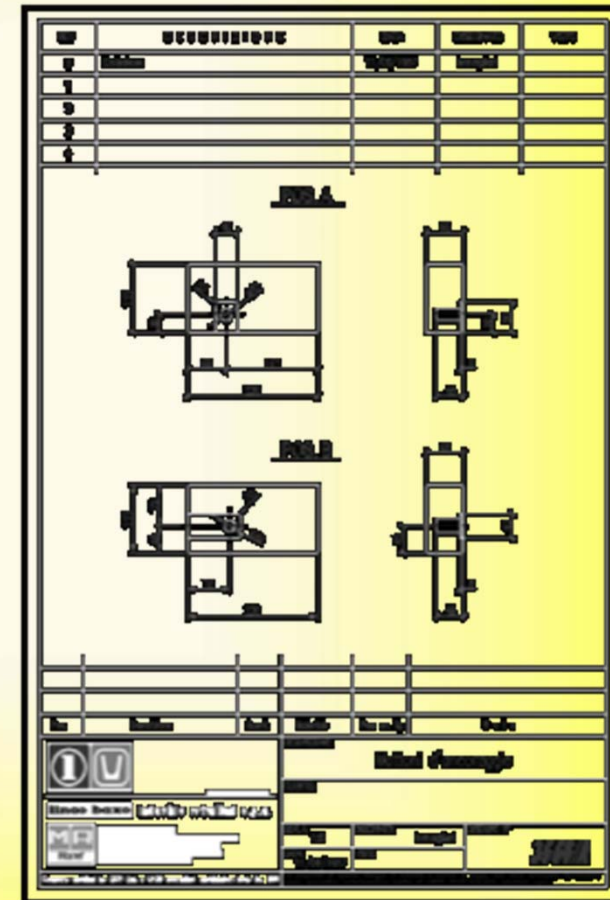
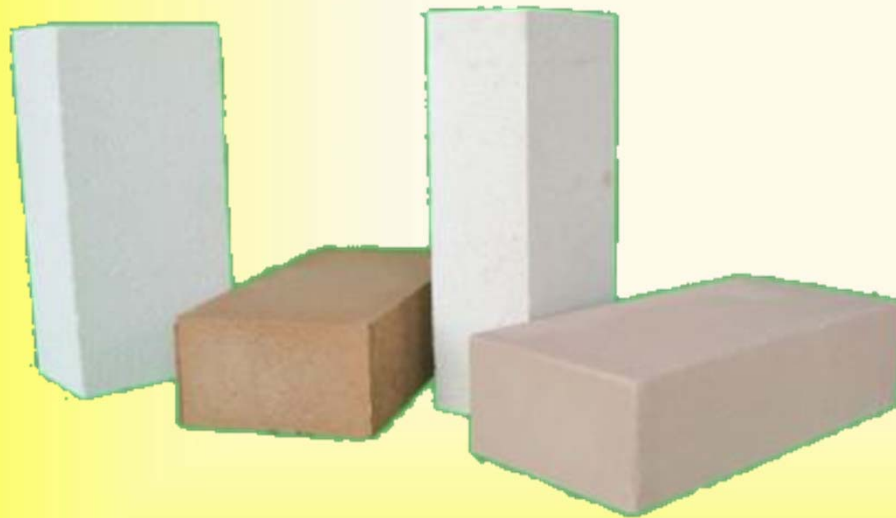
A wide range of standard & itemized shapes in mullit suitable for severe applications

- MAREF 58 SM
- MAREF 62 SM
- MAREF 65 SM



Insulating Bricks

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

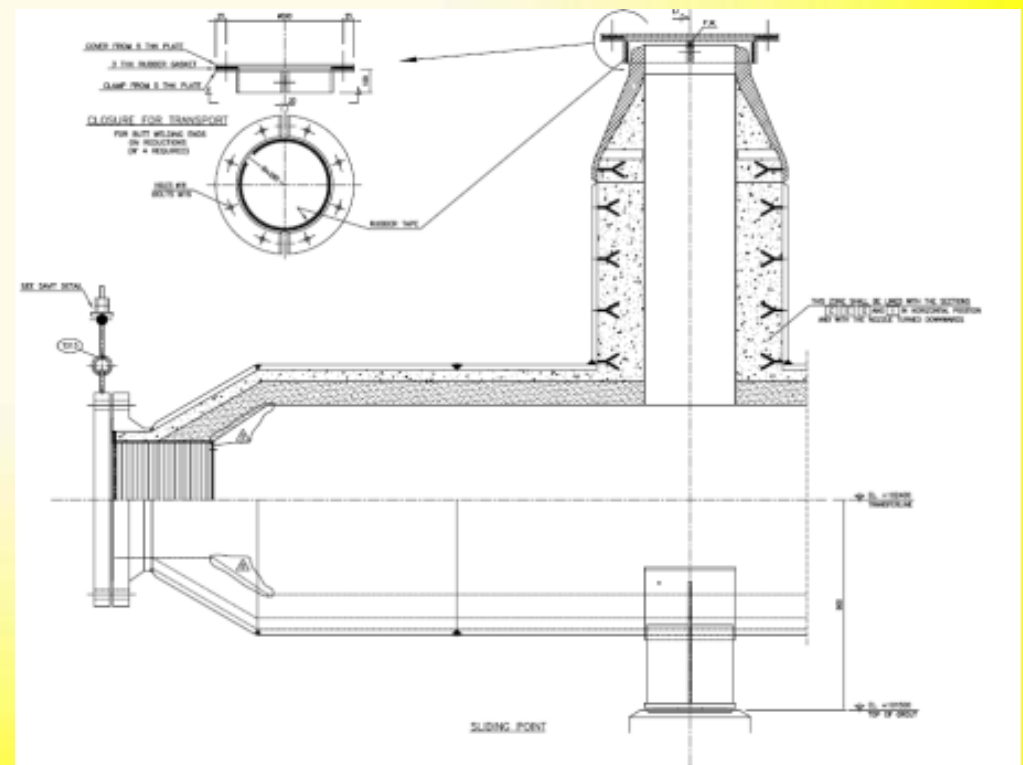


A Complete Range of Castables



Dense & Insulating Castables based on:

**TABULAR ALUMINA
FUSED ALUMINA
CHROME-ALUMINA
BUBBLE ALUMINA
INSULATING AND DENSE GROG**



A Complete Range of Mouldables and Mortars



Ceramic & Soluble Fibres/Ancillaries



**BLANKETS
MODULES
BOARDS
MASTICS
COATINGS**





Engineering and Supervision

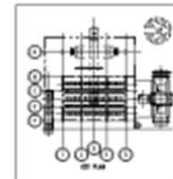
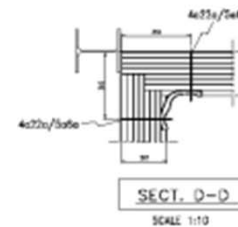
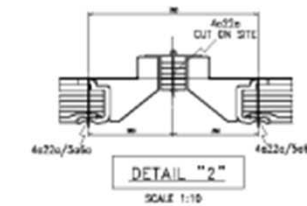
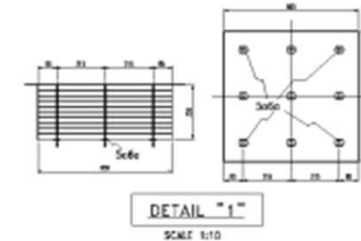
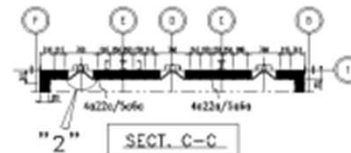
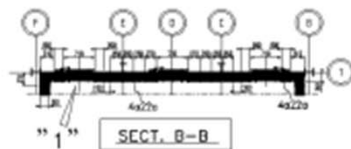
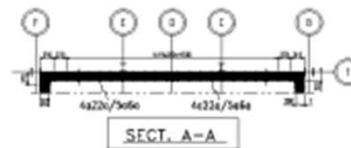
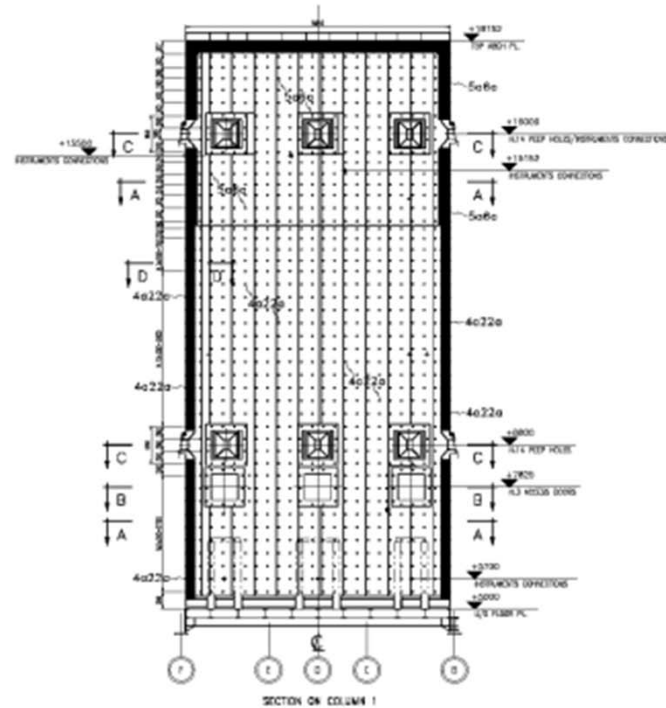
- Primary process furnace:

- Reformer
- CCR Heater
- Steam Super Heater
- HDS Reactor Hrater
- Stabilizer Reboiler Heater
- Splitter Heater
- Reactor feed Heater
- Stripped Reboiler Heater
- Combined Heater
- Distillate Fractionator feed Heater
- Column Reboiler Heater
- Hot Oil Heater
- EDC Cracking Heater
- Crude Feed Heater
- Vacuum Heater
- Visbreacker Heater
- Crude Charge Heater
- Tail Gas Heater

- Recovery Sulphur Unit:

- Reactor
- Combustion Chamber
- Incinerator
- Sulphur Condenser
- Sulphur Pit
- Burner Pit

Engineering



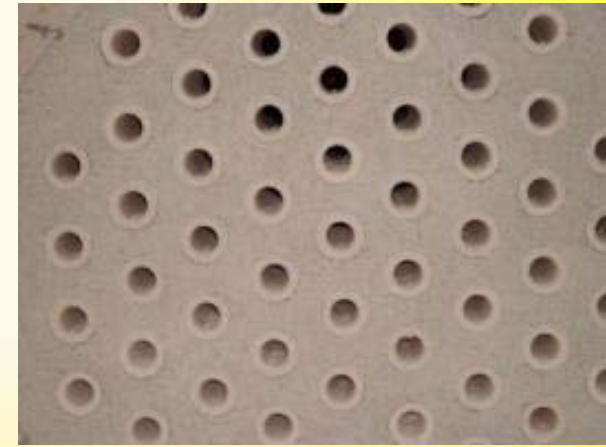
POS.	DESCRIPTION	NET QNT.	LOCATION
4x22s	SS ANCHORS INCONEL E01 A=225 mm	690 pos	RADIANT WALL SECT.1 - LOWER PART
5x6s	SS ANCHORS INCONEL E01 A=275 mm	340 pos	RADIANT WALL SECT.1 - UPPER PART

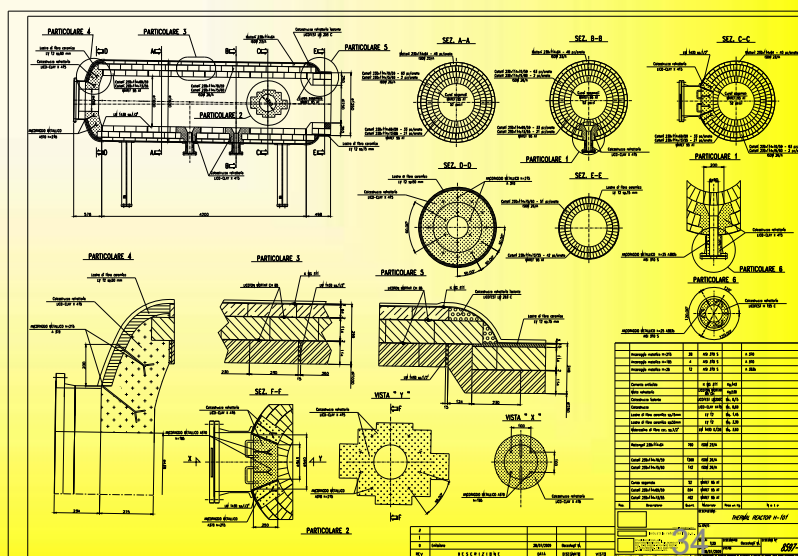
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	C1: ELABORATED	
	C2: APPROVED WITH COMMENTS	
	C3: APPROVED FOR CONSTRUCTION	
	C4: FOR INFORMATION ONLY	
	DATE: 07.07.16	SCALE: 1:10

KT S.p.A. 00100 ROMA - VIA M. D'AMICO, 10 TEL. 06/49.10.10.11 FAX 06/49.10.10.12 WWW.KT.IT	CLIENT: KT S.p.A.	
	PROJECT: K216-HYDROGEN PRODUCTION UNIT - ISC	
	DRAWING: CNAK RUSIA-REFORMER ANCHORS DRAWINGS	
	SECT.1-ASSEMBLY, SECTIONS & DETAILS	
 KT S.p.A. 00100 ROMA - VIA M. D'AMICO, 10 TEL. 06/49.10.10.11 FAX 06/49.10.10.12 WWW.KT.IT	DATE: 07.07.16	SCALE: 1:10
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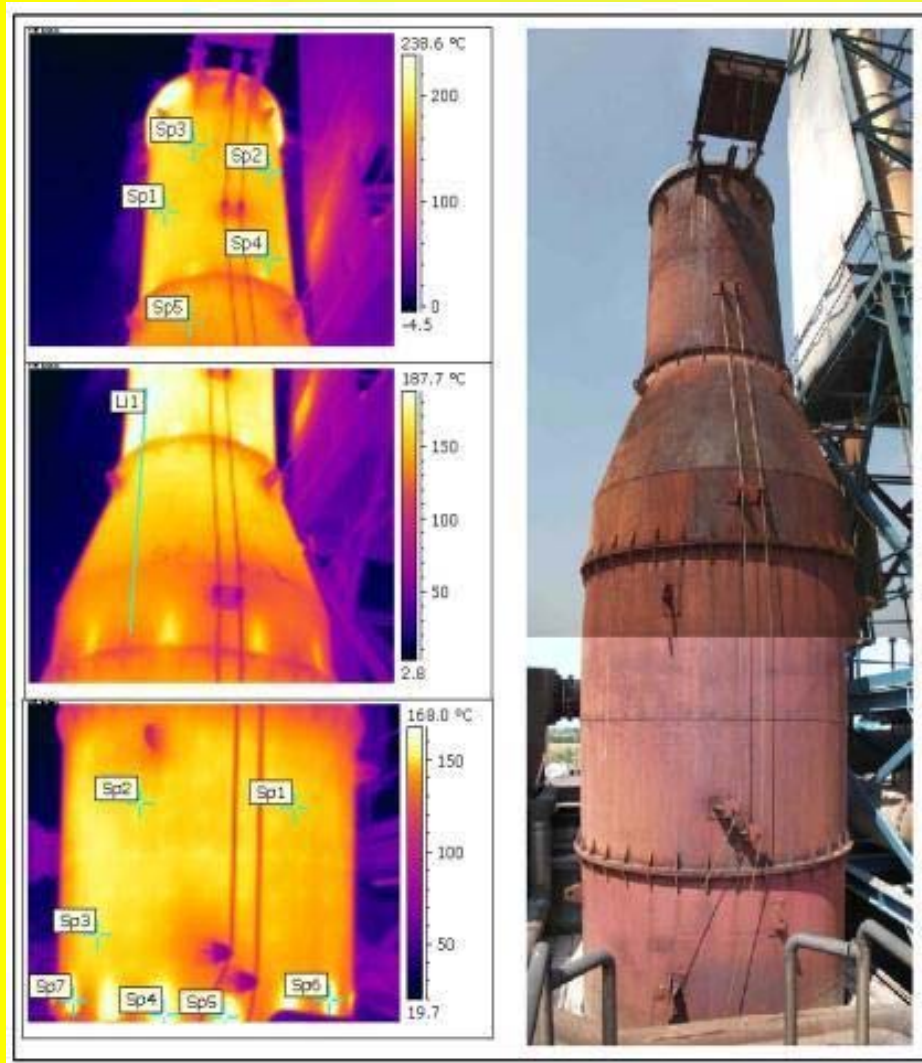
Site / Shop Erection & Contracting

- A departement with experience in dismounting / installing refractory and insulating materials in heavy industries over the last 30 years. Cost efficiency, dedication to manual work and highly appreciated precision characterize this outstanding operation.
- Support stuff 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 materials disposal to manpower availability.
- Skilled personnel, using modern installation equipment, work with all common refractory and/or insulating materials available.



[illegible]

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

