Since 1945, the refractory specialist at your disposal.

An ongoing story of success...

Eredi Scabini has been on the refractory market for almost 75 years, during which time it has grown steadily, to become what it is today: a company driven by both international and national goals, which has always believed in the importance of good business practice to offer products and services of quality, with ever-improving performances and more and more advanced technologies, with the aim of achieving growth not only for itself but above all for its customers.

To enable this to come about, the company’s organisation has also undergone major changes over time: its production has increased in terms of both revenues and number of types; the company has expanded its premises to accommodate the new equipment and the new staff required.

The latest expansion took place in the first half of this year, when the company purchased another 5,000 sqm of factory buildings next to its headquarters.

Today, Eredi Scabini has a total operating area of about 80,000 sqm, on two separate sites. The plants are close together and are both strategically located in the Milan hinterland.

The complex includes 3 different transformation and preformed production plants, and recently expanded with 2 new high-temperature furnaces of impressive capacity, several warehouses for new materials and products in transit, and a brand new control room entirely dedicated to the operation and design phase, which processes and accompanies the birth of the products and solutions offered to customers: the ATC - Advanced Technology Centre, opened at the end of 2018.

The new ATC focuses professionals of vast experience, including engineers, chemists and designers, who coordinate exchange ideas on a daily basis in a well-organised process, to create products and services of excellence. It is equipped with state-of-the-art technological tools including Waveguide Deposition X-Ray Fluorescence spectrometers, Electric furnace Machine for production of beads (ROD analysis), compression and flexural strength test presses also for large-sized products, equipment for analysis of apparent density and porosity, sift, sumping and much more.

Eredi Scabini is a sound, prosperous business, with a wide past and excellent future prospects, thanks to its innate ability to evolve and keep constantly up to date.

Flextong®: unity is strength!

Flextong® is a line of Eredi Scabini products developed and launched relatively recently. However, thanks to its distinctive characteristics, it has rapidly achieved substantial business, becoming one of the product lines most widely used in the market requiring high levels of performance and involving tough and critical conditions. Today Flextong®, the exclusive Eredi Scabini product family with waveguide applications for coal, iron and steel, aluminium, copper and cement.

What makes Flextong® so special?

First and foremost, we need to know that Flextong® is not a ceramic product but is a composite. Companies are characterized by the combination of at least two different, physically separate substances, with different properties. The basic material has new physical and chemical properties not provided by its individual constituent materials. One excellent example is a composite material reinforced with carbon and steel materials in their individual identities but capable to generate a product with unique characteristics, the relation mainly with the protective façade, while the concrete is more resistant to the corrosive media.

The individual constituent parts of the composite are the MATRIX and the REFLECTING MEDIUM. Flextong® is made of a matrix consisting of a CERAMIC material, while the reinforcement is in METAL. Flextong® is therefore a fibre-reinforced composite material. The matrix must be initially dry to fill the space and bond properly with the matrix, then harden to protect the fibres from physical and chemical attacks. The density of the fibres, on the other hand, is so high, to give the composite strength and resistance to mechanical stresses. Flextong® has a carbon matrix made from a special superlative, high容许, strengthening set refractory material, which gives the product hardness and structural properties, while the large quantities of special steel fibres, with controlled orientation, give it flexibility.

Preformed are easier said than done!

Eredi Scabini was one of the first, if not the first, at the time of the very first refractory industry companies to believe in and promote the development of the technology for producing shaped products, as an alternative to bricks and castables. More than 10 years have now passed since those very early days, and time has confirmed the wisdom of the decision made then from which is now firmly established with a market share not only in Italy but also abroad, thanks to its consistent benefits, the use of preformed which add new performance characteristics which have now become standard, particularly with the preformed. As a result we have a catalogue of over 600 different preformed solutions, including complete refractory furnaces for aluminium, vertical furnaces for oxygen plants, furnaces for blast furnaces, furnaces for steel industry, furnaces for greenhouses and more, suitable for our customers' needs and requirements.
With Eredi Scabini’s modular preformed and prefired solutions ABT you can forget about your furnace lining!

Eredi Scabini has always believed in the advancement of preformed shapes and its capability in producing preformed shapes up to 15 tons in weight. That’s why Eredi Scabini imagined the unique solution that today is a benchmark in the market sector. Eredi Scabini’s ABT - Advanced Block Technology - solutions are preformed and customized for the customer’s furnaces. They are developed for the customer’s specific products when using Unistone®, dense prefired shapes featuring excellent “heat working” properties. This way, the customer’s preformed shape and the unique bonding system result in a winning combination against thermal and chemical attacks.

The customer is Eredi Scabini’s largest producer of bronze rod, with a melting capacity of 70,000 tons/year. The melting-casting section comprises 3 furnaces. The largest is equipped with two ceramic induction melting furnaces of 75 and 122 tons, two ceramic induction melting furnaces of 300 tons and a 30-ton ceramic induction heating furnace, all supplying a vertical continuous casting plant. In 2006, after successfully testing the first ABT melter furnaces using the ABT Advance Block Technology system, Eredi Scabini designed and installed the lining of these heating furnaces using the same system, replacing the old brick lining. The results obtained were extremely convincing, starting from the installation itself, which took just 5 days compared to the 30 required for the previous lining. But that was not all. While in service, the installation lining performed maintenance on many occasions, until it was eventually completely replaced after just 6 years; the Eredi Scabini ABT Advanced Block Technology solution is still in operation, 9 years after installation.

Dristone® the dry ramming mix that really makes the difference!

Eredi Scabini has always been a leader in the development of top quality refractories, thanks to the large range of products, which can be used for the realization of refractory and insulating linings by a wide variety of methods. Dristone® is a line of these dry ramming mixes made with crushed or basic raw materials for installation by dry ramming compaction. These products can be used as either safety or wear linings and with either disposable or reusable frameworks.

The customer is a well-known iron foundry with a production output of about 35,000 tonnes/year of grey (50%) and ductile (50%) cast iron. A few years ago, it also began to produce steel for the automotive industry. The cast iron foundry contains 28 tons ceramic induction furnaces and 4 1-tonne gas-operated electric furnaces, the steel foundry is also equipped with ceramis induction furnaces from 1 to 7 tons. The final lining for the steel furnaces is preformed in duration and maintenance problems, and furnace life has been improved. In 2 years, the maintenance of the gas-operated electric furnaces were also improved using the Dristone® system. The lining was carried out using our automatic ramming machines, operating with 40 ton 3000-ton rammer. The solution doubled the usable lifetime while maintaining a high-quality level, demonstrated by the fact that the renewed Dristone® was found to be partially intact on dismantling.

Stronger and more reliable charging area with Flexstrong®

Flexstrong® is a preformed ceramic monolithic composite refractory with high thermal shock resistance and corrosion resistance. Thanks to the unique Flexstrong® technology for the installation of lining bricks and/or ramming blocks, Eredi Scabini’s Flexstrong® in 2007, with a new combination of ceramic matrix and refractory material, has been developed for applications requiring great thermal strength in heavy industrial areas at high temperatures, such as in the foundry industry.

The customer is an international foundry on the west coast. With a production capacity of over 150,000 tons/year and more than 40 years of experience, the company is a benchmark for all production and finishing companies in the engineering, electronic and construction sectors. The customer needed to solve a series of problems around the charging area of the steel furnace, especially with respect to the metal feed doors. The problems included excessive erosion of the metal feed door causing the formation of bridges, a very high temperature on the charging area structure, requiring for air-cooling, and undesirable impact strength and lifetime.

In response, Eredi Scabini developed a new charging area lining using Flexstrong® HT. The preformed ceramic monolithic composite refractory with high thermal shock resistance was used as a butt joint for both the refractory lining and metal casting. This lining was installed using a special tooling. It is just 1 1/2 days.

Apart from the benefits of easy tool installation, this solution solves the above problems, with no more erosion of cathodes or bridge formation. A dramatic fall in the metal structure temperature from 4000°C to 100°C and thus no more need for air-cooling, and excellent mechanical strength. The new furnace was then put into operation, proving the Flexstrong® technology. The use of the new material was effective, and the furnace was then restarted, utilizing the improved Flexstrong® technology, resulting in increased product output and stable operation.

Cps® (Crucible preformed system): still the best solution on the market for coreless induction furnace linings.

Eredi Scabini is the only company which has introduced and continually improved the Cps® (Crucible preformed System), an innovative solution for coreless induction furnace linings. Every furnace is a one-of-a-kind system. The CPS® is tailored to the specific requirements of the customer.

The customer is a long-established European company that produces the world’s largest number of high-quality steel and copper alloys. The plant is equipped with a coreless induction furnace with a capacity of 50 tons and is used to melt various weights of stainless steel and aluminum alloys. The original operating lining solution was not satisfactory. The casting area of the lining was constantly eroded, leading to frequent breakdowns.

The customer asked for a lining system that could withstand the continuous casting of stainless steel, providing excellent heat resistance, minimal wear, and low maintenance costs. The CPS® liner was installed and operated without any issues, achieving excellent results in terms of performance and durability. The lining was successfully customized for the customer’s specific production needs, and the CPS® technology ensured long-lasting performance and reduced maintenance costs.

CPS® is a unique system that combines the advantages of preformed and rammed linings, offering a cost-effective and efficient solution for coreless induction furnaces. It is a reliable and flexible solution that can be adapted to various production requirements, providing excellent heat resistance and minimal wear. The CPS® technology is designed to withstand continuous casting of stainless steel, ensuring long-lasting performance and minimal maintenance costs. This makes it the best solution on the market for coreless induction furnace linings.
ECO SIL™+ Flustone®: an unbeatable pair for coreless induction furnaces!

**ECO SIL™** and Flustone® are the ideal combination for coreless induction furnaces. ECO SIL™ is a high-quality, low-ash silicate magnesia that provides excellent thermal shock and chemical resistance, while Flustone® offers a unique combination of thermal shock resistance and chemical stability. Together, they create a powerful pairing that ensures durability and performance in a variety of refining processes.**

The excellent thermal shock resistance of ECO SIL™ and Flustone® makes them ideal for use in furnace linings, where they can withstand the extreme temperatures and pressures encountered in steelmaking operations. Their excellent chemical resistance also makes them ideal for use in the production of a wide range of metals, including stainless steel and high-alloy steels.

**For further information: sales_dept@erediscabini.com**

---

More resistant, longer-lasting launders for copper with Flustone®

Flustone® is a line of exceptionally resistant in-situ castables with excellent fluidity allowing easy self-distribution. These products are used mainly for the realization of launders requiring high resistance to abrasion and erosion, as well as high density and fluidity. They are self-flowing, allowing linings to be repaired by applying the same product to the warm surface without changing the flow when lining.

**For further information: sales_dept@erediscabini.com**

---

Engineering-specific products = Exponential improvement in Upper Case – Inductor Performance!

**EREDISCIABINI** specializes in the supply of engineering products and services for iron foundries. The combination of state of the art products and specific expertise delivers outstanding performance in terms of efficiency and energy savings.

**For further information: sales_dept@erediscabini.com**

---

With RESISTONE™, the flooring is 6 times more resistant.

As well as a large range of refractory solutions and prefabricated shapes, the company has a line of products specifically developed for industrial flooring subjected to extreme mechanical and chemical stresses combined with heat. RESISTONE™ products are installed by professionals in a similar way to castable refractories, but develop extremely high mechanical strength within just a few hours and can be used with temperatures of up to 1400°C in contact with metal and slag agglomerates. The rapid installation and ease of use also make RESISTONE™ solutions for maintenance processes.

**For further information: sales_dept@erediscabini.com**

---

ADVANCED REFRACTORY SOLUTIONS
Papers

Refractory concrete: knowing and limiting the explosion hazard.

The risk of water

In general, water performs various functions in refractory castables. It dilutes the open pores; it serves as a lubricant between particles after the open pores have been saturated. It interacts chemically with other elements in the dry mix to create new chemical compounds (dehydration of carboxyl groups bound to moisture), which can generate undesirable reactions (such as refinement or hydration). It increases the workability of the product, and so on. In practical temperature ranges, water requirements (the temperature in the case does not have a unit in the sense that the water contains a large amount of water) and allows partial water protection during initial heating by preventing "cracking" of the kiln surface. The basic, just water content is very important. A change in the water content can be considered to be the most important factor in affecting the properties of the castables. In general, water increases the initial surface tension of the product, and so on. It is important to note that the water content is critical. The water content should be around 5-10% to ensure good workability of the castables. However, if the water content is too high, it can lead to the formation of cracks or voids in the castables, which can affect the performance of the castables. Conversely, if the water content is too low, it can lead to insufficient water for hydration, leading to poor performance of the castables. Therefore, it is crucial to control the water content during the mixing process to ensure the desired properties of the castables.