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CERAMICHE PIEMME: MADE IN ITALY IN THE WORLD _____page 2

CERAMICHE PIEMME...IN FIGURES_____page 3

PRODUCTION_____page 4

ENVIRONMENT FRIENDLINESS_____page 5

CERAMICHE PIEMME: the collections_____page 6

CERAMICHE PIEMME CONTRACT: latest collections_____page 13

PIEMME PROJECT SOLUTIONS_____page 15

TAILOR MADE_____page 16

MATERIALS AND FINISHES_____page 17

THE ORIGIN OF CERAMIC TILES_____page 18

Established in Maranello (MO) in 1962, Ceramiche Piemme specializes in the manufacture of ceramic floor and wall tiles. The modern production facility in Solignano di Modena with its heat-recovery kilns every year produces over 7 million square metres of porcelain stoneware. The wide range of ceramic floors and coverings also includes the line "Ceramiche Piemme Contract": a division dedicated to ceramic collections created to support the designer in choosing finishes for public and private spaces.

CERAMICHE PIEMME: MADE IN ITALY IN THE WORLD

Established in Maranello (MO) in 1962, Ceramiche Piemme specializes in the production of Made in Italy ceramic floor and wall tiles and is based in Fiorano Modenese (Mo).

In 2000, the company began a radical industrial transformation, investing in both the production process and in a new range of products. The production process switched from single and double-fired red body tiles to the most innovative systems dedicated to porcelain stoneware in sizes such as 60x60, 80x80, 45x90 and 60x120cm.

With the introduction of more sophisticated digital decoration technology, the need arose to also rethink the product range from a cultural and design viewpoint.

With this in mind the company has revamped the management and started new partnerships with some of the protagonists of contemporary design.

In 2019 the company has extended its range with the introduction of "**Ceramiche Piemme Contract**" (www.ceramichepiemme.it/contract/): a division dedicated to ceramic collections created to support the **designer** in choosing finishes for public and private spaces.

Ceramiche Piemme closed a 2021 budget that came in at 80 million euros, with 12 percent growth over the previous year and an Ebitda of 12.76 percent, or 10.3 million.

A result weighed down by 87 percent exports, with France and the US as the top foreign markets, followed by Germany. Net income exceeds 1.5 million euros, while financial debt falls 18.3 percent from 2020.

The company is reaping the benefits of its new business plan, which includes various investments in the five-year period 2021/2025, from process and product innovation to strengthening the sales network. In mid-2021, for example, **Ceramiche Piemme USA**, a U.S. branch with headquarters in New York and a logistics hub in Chicago, was established.

These actions have already begun to produce significant cost containment, generating economies of scale that can reverberate positively on the balance sheet.

On the raw materials front, despite the crisis of recent months, Ceramiche Piemme has maintained planned production levels. In this case, the search for new suppliers was accompanied by the strengthening of R&D activities on the product.

CERAMICHE PIEMME IN.. FIGURES

Date established: 1962

Headquarters: Via Crociale 42/44 – Fiorano Modenese (MO)

Production: Ceramic floor and wall tiles

President: Carla Vacchi

Employees: 330

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PRODUCTION

The modern Solignano di Modena production facility, with its heat-recovery kilns, every year produces over 7,5 million square metres of porcelain stoneware. Covering a surface area of 100,000 square metres, it today represents an industry benchmark in terms of sustainability and efficiency.

A project which involved an investment of 25 million euro (in 2010) in two new 98-metre kilns, four presses linked to horizontal spray-dryers and a cutting-edge, fully-robotized piece handling system. And besides this, the implementation of the decoration department with seven high-definition digital stations; three new "one roof" ceramic tile polishing, lapping and grinding lines, as well as electronic quality standard control. A new computer system monitors every stage of the production process: from the selection of raw clay to the dispatch of finished product invoices. Every aspect has also been optimized in terms of energy efficiency to ensure low environmental impact.

In 2020 SACMI technology has been chosen to create a large cogeneration system which, by producing electricity through a jet turbine powered by methane, will save 6.7 million cubic metres of gas and 13.2 tonnes of CO₂ every year. This is a sustainable choice that uses the latest-generation software and reduces consumption through a cutting-edge system for the recovery of heat contained in the turbine's exhaust fumes. The installed system is designed to handle 53,000 normal cubic metres per hour of exhaust fumes at 500 degrees. Channelled by the turbine into a large, almost 140 metre-long duct (1.7 metres in diameter), the fumes are directed to the two SACMI atomisers, ATM 036 and ATM 065, reducing the factory's methane requirements by 6.7 million cubic metres of gas per year (equal to 13.2 tonnes less CO₂ released into the atmosphere).

The production range comprises over 20 original series for interiors and outdoors in various sizes (from 30×30 to 60×120 up to 120×120 cm) but also proposals which combine the practicality of ceramics to the aesthetics of other materials. Marble (over 30 variations), wood and even resin or concrete: the 3-D relief surfaces have in fact made it possible to faithfully reproduce the characteristics of all textures.

Rectangular or square, the ceramic tiles are made in many different sizes conceived for interior design but also for outdoors and large highly-trafficked public premises.

ENVIRONMENT FRIENDLINESS

To drastically reduce the consumption of natural resources and CO2 emissions into the atmosphere, Ceramiche Piemme has invested in the modernization of its production facilities with special focus on the heat recovery of its kilns in favour of sprayers and dryers.

The recovered heat is also used to heat the production departments, with a further reduction of CO2 emissions amounting to over 4200 tonnes/year.

The high-performance production of electricity is by means of a natural-gas fuelled turbine.

Ceramiche Piemme is a member of the Green Building Council (www.gbccitalia.org) a non-profit organization which promotes sustainable building and is engaged in fostering the awareness of the public and the institutions on the impact which building materials and methods have on the quality of life.

Thanks to a partnership with the UK institute which promotes LEED (Leadership in Energy and Environmental Design) certification, GBC Italia promotes and adapts to the Italian situation the parameters which establish precise design and building criteria for healthy and energy-efficient buildings. It also sets a market value for "green buildings", stimulates competition between companies on the issue of the environmental performance of buildings and encourages aware consumption behaviour among end users.

In November 2020, Ceramiche Piemme won the **"CONAI award for the ecodesign of packaging in the circular economy"**.

An initiative that awards the most eco-sustainable packaging solutions on the Italian market. Ceramiche Piemme was not only chosen for its raw material savings, but also for its logistics optimisation for the 80x80 cm tiles and simplification of the packaging system for the 30 x 119.5 cm size.

CERAMICHE PIEMME: the collections

JOURNEY

Inspired by the nature of Northern Europe, Journey collection reproduces chromatic and material suggestions thanks to the Synchro digit technology that reproduces ripples, reliefs and many other three-dimensional and tactile effects typical of the natural stone completely synchronized with the digital decoration. A production process that turns ceramic into a new material hard to distinguish from the original one. The new Silk finish creates an extra-soft, silky tactile sensation that comes from a special deep lapping that eliminates any surface roughness.

The aesthetic effect of greater light is enhanced by the 4 neutral shades of the Journey line ranging from almost white beige (Otta) to dove gray (Lomond). Four sizes are available: from 30x60 cm to 120x120 cm, perfect for large spaces or for poolside surfaces. The 3D structures for wall cladding have elegant veins that can gradually take on a more intense feature.

IBLA

The profound tactile appeal of Ragusa "Pietra Pece" asphalt stone, combined with three-dimensional decors that evoke the patterns and reliefs of traditional lace, in a collection that bears the ancient name of the UNESCO World Heritage Site city.

The distinctive stylistic features of the art and culture of the old centre of Ragusa thus become genuine contemporary design tools, available to anyone wishing to re-create Mediterranean moods with elegant evocations of Italian craftsmanship. The Piemme designers developed distressed, tarry colours and surfaces that alternate matt and surprisingly glossy finishes in a ceramic version with the aid of the "Synchro Digit" technology. A similarity to "the real thing" that is not only apparent at first glance, but becomes three-dimensional.

Together with the 4 plain tile colour variants, the "Tombolo" wall tiles, the "Zagara" floral decor and the "Ragusa" and "Opus" mosaics (in two surface finishes, natural and honed) make Ibla a very striking collection.

As well as the more traditional sizes, the new long plank tile (30x119.5 cm) provides fascinating colour effects in multiple installation patterns, both on floors and as a wall covering. The small plank of 10x60 cm and the chevron of 10x53 cm are the basis respectively for Italian (right-angle block) and French (chevron) herringbone installation layouts.

MAJESTIC PURE SELECTION

Calacatta, Statuario, Arabescato and Dolomiti: these are the four exquisite Italian marble varieties restored to fresh life in the surface of the Majestic Pure Selection tile.

The purity, vein patterns and whiteness of the original raw material are reproduced by an extremely high-resolution digital printing technology.

The reference to the great Italian tradition of the world's most sought-after marble varieties evokes a sculpture-like beauty, as the light penetrates the surface before being reflected, giving these ceramic floor coverings a special gleam.

Majestic Pure Selection is thus intended for the interior design of locations of great elegance, in homes and in prestige public projects. Additional effects can also be created in wall coverings by alternating the "marble" with mosaic tiles or the "Grove" and "Foliage" plant-inspired patterns.

The Majestic Pure Selection ceramic marbles are available in the 60x60, 60x119.5 and 119.5x119.5 cm sizes.

There are four colours: Superb Statuario, Glorious Arabescato, Sublime Dolomiti and Magnificent Calacatta, in natural version and in mirror-polished finish, in which the gleam and depth are enhanced by an ultra-glossy effect.

EVOLUTA

Such a multitude of variables only exists in nature: this is the challenge launched with the Evoluta collection, based on the new Synchro Digit Piemme technology. A similarity to "the real thing" that is not only apparent at first glance, but becomes three-dimensional.

Every small vein or streak of color now has a perfectly matching tactile feel, just like in nature. Hyperrealistic reproduction of natural raw materials is combined with maximum freedom from constraints and laying patterns. This makes it the perfect covering for designers and users, also thanks to its convenient installation and maintenance.

The Evoluta collection fully enhances the captivating textures of metamorphic rocks, such as Italian quartzite, offering almost unlimited graphic and surface variations. There are five colors available in three sizes. There are three decorative structures for the coverings: "Cave" is a detailed evocation of the skilled craftsmanship involved in cutting and recomposing small blocks of stone; "Cluster" recalls hexagonal-cut stones, reinterpreting them with a modern twist; finally, thanks to delicate crest-honing, "Forest" makes it possible to create imaginative three-dimensional coverings free from constraints and laying patterns.

OPULENCE

Opulence is inspired by the world's finest granites and marbles, the coarse-grained varieties of large crystals, with spectacular iridescence and colour effects. The range of shades runs from sparkling white, rich in transparencies (Bliss) to magmatic, mineral black (Pleasure); from the spectacular greys of the Caprice and Delight finishes, to the green elegance of the Eccentric finish with golden vein patterns.

Five décor coverings matching the different granites and marbles tones complete the range filling different spaces either with geometric effects, fresh and natural ideas or classic style accents. The petit feu decoration Botanic evokes the latest trends in wallpaper patterns streaked with gold finishes. Antique plays with geometrical fragments in two different tones (light and dark) realized with the most advanced digital technologies. Finally three handcrafted decoration with an inlay effect: Balance, Vertigo and Illusion.

Tiles and slabs up to 60x120 cm are easy to lay down and clean. The resulting floorings are hygienic, hard-wearing and suitable also for public spaces.

GLITCH designed by Benoy

A collection of porcelain stoneware tiles designed by London firm **Benoy**. The word "glitch" refers to the flickering produced on a computer screen by *an unpredicted error*. A theme which is very much in line with the design trend that favours imperfection as a sign of uniqueness.

Hence the inspiration of the Benoy designers, expressed in 8 colours in various sizes. Glitch focuses on the distinctive irregularities of concrete surfaces, such as cracks, films, scratches and wear, and reinterprets them for ceramic tiles. The result is a contemporary collection ideal for both homes and commercial locations (Benoy's real expertise).

MATERIA

An unusual effect, creating surfaces that merge metal, Corten steel, stone and ceramic in a refined, contemporary look. Starting out from very different metals, oxidised or glossy, from the natural feel of stone and the versatility of ceramic, Ceramiche Piemme's R&D team have created a new material with "Materia". Thanks to sophisticated production technologies, this collection combines the ground look typical of hand-polished metal with the small flaws that denote genuine craftsmanship.

It is available in six tones, ranging from the lightest OPAL (white) to DEEP (anthracite), taking in the light grey NACRE, the dove grey SHIMMER, the dark grey REFLEX and the

Corten steel-coloured RUST. Six sizes are available, with two three-dimensional structures and two third firing decorations.

SOUL

All the spirit of reclaimed wood for the new **Soul** collection: digital technologies recreate natural oak in its most natural aspect with all its *knots, flames* and signs of time and *ageing*. In line with the increasingly popular "used look", the Piemme Soul floor tiles in porcelain stoneware are designed to 'warm' the space just like ancient, sturdy parquet made of oak. Under the spotlight in this collection of tiles are the **natural** features of wood with light shades at the base and slight flaming emphasized through hand brushing; the **rustic** effect of knots usually discarded when selecting the boards are enhanced to give more naturalness; the elegance of the **recovered** wood, seasoned and handcrafted in the wax finished version, are the real protagonists of this collection of tiles.

MAJESTIC

Majestic collection of tiles and slabs is inspired by the arabesque textures of marbles like Carrara, Grigio Verona, Nero Levanto, Onice, Nero Marquinia and Bianco Arabescato. The collection deliberately breaks out of the classic mould of marble effect surface installation and interprets interior decorating with haute couture taste. Tiles and large slabs interpret the veins of precious marbles in eight colour shades with over 150 different graphics to simulate the great diversity of natural materials. Numerous sizes and finishes are combined with decorations and mosaics.

SHADES by Gordon Guillaumier

With the Shades collection Ceramiche Piemme provides a new answer to the dialectic between art and technology: the newest frontiers of digital printing are explored by designer Gordon Guillaumier to give life to floors and surfaces of artistic inspiration. The porcelain stoneware tiles and slabs of the Fiorano Modenese manufacturer reproduce the designer's strokes.

The Shades tile collection replicates in a realistic way the delicate and imperfect sign of the brush stroke; the overlapping colours create unique nuances which go to combine with the 5 basic concrete-effect shades.

The four types of decoration are each expressed in five shades that vary from blue to light blue, from white to golden and mid-blue: the real colour movements so typical of water-painting.

The encounter of modernity and tradition is also expressed through the choice of sizes: with the modern 60X60cm or 60X120cm slabs, Ceramiche Piemme combines hexagon-shaped decorated tiles that recall traditional cement tiles.

FLEUR DE BOIS

Porcelain stoneware 'dresses up' in a brand new outfit, combining the effects of American and Italian walnut wood, and relying on advanced digital technologies to flaunt an even more natural look.

The collection recreates the veining **effect of wood** and adds a few special effects, such as the slightly hand-planed look or the worn effect characteristic of old floors.

The sizes available make it possible to recreate classic laying configurations or for creating the chevron design – sometimes known as the herringbone, or Hungarian point pattern - with the special 60x120cm size. The range of colours spans from lighter, modern shade Glace to the darker Chocolat tone, offering one more natural shade Miel.

UNIQUESTONE

Stone, granite and marble: an unprecedented blend for the Uniquestone collection by Ceramiche Piemme, designed to furnish interiors and outdoor environments with elegance, using a product that is easy to lay and maintain.

Uniquestone is fruit of the continuous research performed by the company on materials and digital technologies. The natural finish, for example, recreates in detail the textured effect of the various minerals that inspire it, whereas the polished version adds elegance and brilliance.

The collection includes 5 colours: from the lighter "silk" shade to the darker "nite" colour. The tiles are available in a variety of sizes (30x60, 60x60, 80x80, 60x120 cm) and include the decorative element Chevron (10X53 cm) designed for use in coverings laid in a herringbone pattern. The series also offers four 3D wall coverings that reproduce the effect of hand-processed stone: Level, a large tile (60X120cm) featuring the 4 textured effects by which Uniquestone is inspired; Iced which recreates the veined effect of stone with a fine polished effect on the top, Maya with a geometric design, available in *ton-sur-ton* or in a range of shades that can easily be matched and Weave.

FRAGMENTS by Pierre Charpin

Pierre Charpin has chosen the name "Fragments" for the Ceramiche Piemme collection, paying tribute to the painstaking task of gathering and composing references to his artistic work, elements of the history of the company from Fiorano Modenese, inspirations and

trends linked to his vision of space and surfaces

Walls can be “dressed” in an outfit combining shiny and matte surfaces with the use of maiolica in 6 natural shades: from the lightest colour Milk to the darkest one Charcoal (dark grey), and with the grey Cloud shade and the warmer Tan tone; the grey Fern and the light blue Ocean.

BITS&PIECES by Gordon Guillaumier

The collection of floor and wall tiles in fine porcelain stoneware (1250°C full-body coloured) designed by Gordon Guillaumier, is characterized by sizes and digital decors inspired by the Greek and Roman classical period.

Making this collection involved developing two new tiles: lava stone (Bits) in natural or polished version, and in five colour shades (Pearl Grey, Peat Brown, Pitch Black, Pewter Smoke, Powder Bone), and marble grit (Pieces) in polished version only in two colours (Steel Grain, Ash Grain) only available in polished smooth finish.

Playing with materials and shapes, Guillaumier replaced the marble “tozzetto” with wood-effect inserts, setting them in the lava tiles (Bits), while he preferred marble fragments in the smooth marble grit tiles (Pieces) for a modern reinterpretation of classical Palladian.

Quad and Facet are the two graphic textures (rectangular or irregular “tozzetti”)

Bits & Pieces received the prestigious ADI Ceramics Design Awards 2016 for its modularity and the originality of its colours.

ELEGANCE

Elegance is a collection conceived to combine all the elegance and the preciousness of marble with the versatility of porcelain stoneware. Thanks to modern digital technology, the natural veins of the precious stone are designed on surfaces to create one-of-a-kind and elegant environments.

Three different marbles – which go from a softer colour with lighter veins to deeper coloured lines - are reproduced in this collection, which is inspired by three icon streets of Italian fashion in Milan and Rome: Via Condotti, Piazza di Spagna and Via della Spiga.

Furthermore, the new Extra Gloss surface, the upshot of cutting-edge polishing methods, conveys depth and brightness, features particularly suitable for designing hotels and prestige residential interiors.

MARMI REALI

The Marmi Reali collection presents the most precious Italian marbles made of fine porcelain stoneware, including in matt version. The line, thanks to the most modern and cutting-edge production technology, is able to reproduce in a natural way the typical and unique veins of this material. Alongside the slabs in natural version, Marmi Reali Mat present new forms, with lead role played by three-dimensions and geometric patterns.

5 different shades and veins of marble available in 2 sizes (30X60cm - 60X60cm) and also in the 80X80cm size for Carrara, Statuario Gold, Calacatta and Alabaster shades.

The mat version is available in 3 shades (Statuario Gold, Carrara and Nero Reale) in the two sizes 30X60cm and 60X60cm.

The collection is designed for interior bathroom, kitchen and living area floors and walls.

URBAN

A collection created using digital technology with a modern and essential design, smooth surfaces or characterized by relief sections with cutting-edge technical properties and high resistance to slipping and sudden weather changes, which makes it perfect for highly-trafficked residential and commercial interior floors, but also for outdoor flooring. Available in 5 shades (bianco, sabbia, terra, grigio and nero), to the 4 sizes is added the 20mm thick version ideal for high stress floors.

CERAMICHE PIEMME CONTRACT: latest collections

“**Ceramiche Piemme Contract**” (www.ceramichepiemme.it/contract/): a division dedicated to ceramic collections created to support the **designer** in choosing finishes for public and private spaces. Ceramiche Piemme Contract was created to facilitate the construction industry chain linking customer to company.

OPUS

Opus is freely inspired by cocchiopesto, a material discovered by the Phoenicians and perfected by the Romans, that has gone through the centuries to characterize the architecture of the Mediterranean area.

This particular coating, originally composed of brick fragments combined with fine mortar based on aerial lime, revives now in a contract collection that digitally recreates the characteristic granulometry of cement agglomerates on the surface of the ceramic slabs.

A texture characterized by extremely realistic material effects, enriched by glossy inclusions on a matt background.

A striking reference, which chromatically is declined in neutral colors, which abandon the classic shades tending to red for a more contemporary concrete effect ranging from the light Opus Album to the darker Opus Griseo.

The Opus tiles are available in 120x120, 80x80 and 60x60 sizes, ideal for any use and installation solution.

VENETIAN MARBLE

The collection combines the technical performance of the latest generation of porcelain stoneware with the aesthetics of the Venetian terrazzo flooring. Used since ancient times in Greece, this type of floor then spread throughout Italy thanks to the ancient Romans first and then to the Venetian nobles. A floor covering that is an integral part of the history of Made in Italy and that through the centuries of its evolution has come down to the present day to be reinterpreted in ceramic key. The Venetian Marble Collection is available in 4 shades -Rainbow, Cloud, Fog, Storm- and 4 sizes (30X60cm, 89,5x89,5 cm, 60X120cm and 60X60cm).

AGELESS

The collection is inspired by the aesthetics of industrial concrete resin: thanks to the most modern digital technologies, Ceramiche Piemme researchers have reproduced on porcelain stoneware tiles the pleasant aesthetic effect with a ceramic twist and a light movement of the typical directional streaks associated with the manual or mechanized laying of mortar.

Available in "natural" finishes, the new contract collection combines industrial aesthetics with high technical performance and guarantees high resistance to daily stress in residential, commercial and large public areas. The Ageless Collection is available in 7 shades - Africa, Island, Sahara, Europe, Polar, Britain, Baltic - and 2 sizes (30X60cm, 60X60cm). To these is added the 3D structure Textured in 60x60cm format with a thickness of 9.5mm, available in Baltic, Britain and Sahara colors.

PIEMME PROJECT SOLUTIONS

The construction industry is rediscovering porcelain stoneware for public and private projects thanks above all to the development of production technologies that have given us new sizes, surface textures and decors unthinkable until a few years ago. Easy to install and convenient to clean or renew, stoneware can be used on floors and walls both inside and outside buildings.

The vital factor is knowledge of its characteristics and installation options: therefore, **Piemme Project Solutions** offers a consulting service and a complete range of tools which historic Modena-based producer Ceramiche Piemme provides for architects and contractors.

Solutions for installing outdoor pavings in the extra-thick 20 mm size, and for indoor or outdoor raised technical floorings (loose-lay or with pedestal) and floating floorings.

Particularly resistant to the most extreme stresses, 20 mm porcelain stoneware allows the construction of floating pavings on terraces and courtyards, the creation of paths by dry laying on grass, or the safe temporary paving of even vast areas on sand and gravel substrates.

The slabs produced in this high-strength thickness are also suitable for installation with glue on a screed, ideal for surfaces exposed to high mechanical stresses, such as car parks or industrial or retail areas. Raised paving, on the other hand, is recommended for free-draining outdoor areas such as terraces and public and private courtyards.

Ceramiche Piemme's 20 mm tiles, available in a variety of finishes, combine aesthetic quality with high levels of technical performance, such as resistance to heavy loads, slipping, frost, thermal shock, mould, staining and salt.

TAILOR MADE: a real *prêt-à-pos*er bathroom collection

In September 2019, Ceramiche Piemme presented the first sanitary fittings in its *Tailor Made* project: porcelain stoneware washbasins, tops and shower trays made in Fiorano Modenese.

Matching sanitary fittings ready to install together with the tiles, making the very most of the interior designer's work and the technical characteristics and looks of ceramic: an eco-friendly, versatile, hard-wearing material.

A washbasin/freestanding unit which can also be installed in the centre of the room, wall-mounted washbasins in different sizes, tops and shower trays: every Ceramiche Piemme sanitary fitting can be produced in different finishes to suit the bathroom's interior design.

A furnishing solution also offered to private customers or to architects wishing to design creative, easily constructed bathrooms: the ceramic slabs and tiles used for floor and wall coverings now enable the realisation of this original collection of sanitary fittings.

Produced in innovative materials, with incorporated wastes, the washbasins, shower trays and tops are ready for installation with no need for any masonry works, saving time and complications. A service which not only sets free the creativity of users and interior designers but also guarantees the very highest technical quality, including with regard to reliability and safety.

There is a vast selection of finishes available for matching shades with the bathroom's other surfaces, with marble, concrete or stone-effect textures. Perfect for the renovation of hotels and other residential and public buildings as well as for high-end residential projects.

MATERIALS AND FINISHES

Ceramics are made from natural clays and are completely recyclable; once installed, they are hygienic, do not harbour dirt or bacteria and are odourless. Ceramics do not burn or release harmful substances, not even during a fire; ceramics do not absorb, do not discolour in the sun, do not freeze and are a hard-wearing material perfect for use in residential and public environments.

Originally designed as a product for technical applications (highly-stressed flooring such as public premises or industrial plants), thanks to the progress made by production technology stoneware has seen its market extend considerably. To sturdiness and flexibility of use have in fact been added aesthetic qualities which have determined its success not only in public buildings but also in quality residential projects.

The colour effects obtained by the introduction of colouring oxides in the mixture of clay contribute to the success of this material in Italian design and interior decoration

Glazed or unglazed

Glazed tiles have their surface covered with a layer of coloured glass. The variety of glazes used permits obtaining a practically unlimited range of colours and decorations. Unglazed tiles instead are uniform with no difference between surface and substrate.

With porous or compact substrate

The substrate is the body of the tile: it can be compact or characterized by the presence of pores. To measure the porosity, the amount of water must be determined which is absorbed in particular conditions of imbibition.

Pressed or extruded

The two methods used for forming ceramic tiles envisage: pressing from a powder mixture, compacted and formed in a high-pressure press. Extruded tiles instead are obtained from a paste passed through a special die.

Red body or clear body

Depending on the raw materials used, the tile substrate can be coloured or clear. The colour of the substrate in glazed products is not visible on the surface, while in the case of unglazed products, it determines the aesthetic appearance of the tile. In some unglazed products different colours can be obtained by adding pigment dyes.

THE ORIGIN OF CERAMIC TILES

Among the first functional and decorative materials for domestic use, tiles documented in Egypt date back to at least the 4th century B.C. They were made of clay and were fired and decorated using blue glazes made of copper.

Other tiles of the same period have been found in Mesopotamia; Tunisia (dating back to the 9th century); Kashan, Iran (11th century) and in various mosques in the Middle-East.

From the hexagon-shaped pieces of the late-Roman period made of cotto with marble insert, we come to the production, including in Italy, of decorated majolica ware.

In the early-16th century, the production began of "laggioni": floor and wall tiles covered with brightly-coloured glazing, according to designs derived in part from Islamic art and also of renaissance taste.

Starting with these types, Italian craftsmen developed new styles, including those tied to the characteristics of the materials available in the different regions.

In Deruta, in central Italy, ceramic ware achieved the height of its glory in the 15th and 16th centuries. Alongside objects in daily use appeared ornamental pieces with geometric patterns and figures.

In the early-19th century, single-theme decorative floor installations began to be replaced by a modular concept of the proto-industrial type.

The growth of the ceramic district around Modena, between Sassuolo and Fiorano is tied to the abundance of clay in the area and to a natural vocation for clay-working that dates back to the Neolithic, as is well documented by the artefacts in the Ceramic Museum of Fiorano Modenese.

But the big boom came after the Second World War, following a burgeoning demand for building materials. Besides Fiorano and Sassuolo, the ceramic district now also includes Formigine, Maranello and Castelvetro.