IFAINTERNATIONAL

IFA INTERNATIONAL 02

INNOVATION FOR ARCHITECTURE

by ETERNO IVICA socio ANIT Via Austria, 25/E - 35127 Padova - Italy www.eternoivica.com



NEXT ISSUES:

The revolution in acoustics

- New waterproofing coverings with two-component cements
- NEW ENTRY in raised floors: XL head
- Spontaneous comments on Bau and Klimahouse

I wish happy festivities to you all, with the certainty that 2015 will bring us all important rewards.

I will be waiting for you at the numerous sector exhibitions and at the conventions we organize.

Riccardo Griggio

OUSTICS ATERVIEW



ING. MICHELE VALOTTO Technical Manager of ETERNO IVICA, Acoustic Engineer

THE REDUCTION IN **REVERBERATION IN** SPEECH-DEDICATED ROOMS

How difficult it is to understand words in large, sparsely furnished environments or even in small rooms characterized by particularly reflective floors, walls and ceilings is a common experience.

Rooms of this type are often afflicted by the problem that is commonly called "reverberation", caused by the excessive multiple reflection of sound waves against the internal surfaces of the room. From a technical point of view, this problem occurs when the room suffers from high reverberation times (TR), defined as the time required for a strong impulsive noise to decrease by sixty million times in comparison with its initial value (or, in practice, to decrease almost to the level of the background noise). Reverberation time can be measured or calculated for each frequency audible by man (from 20 Hz to 20,000 Hz); therefore each environment can be represented by a graphic showing reverberation times according to frequency.

In rooms used for speeches (meeting rooms, classrooms, theatres, churches, but also sports arenas on certain occasions), high reverberation times make speech incomprehensible or listening to the speaker difficult, also when amplification systems are used. Sometimes two people cannot understand each other at just a few metres' distance. This is mainly due to the harmful overlapping of the voice coming from the speaker directly to the listener and the one getting to the listener after various reflections

against the room surfaces.

In most cases it is possible to obtain a marked improvement in speech understanding by skilfully applying to the walls or ceiling a suitable quantity of FONOLOOK sound absorbing panels, consisting of an acoustically active insert in polyester fibre. Acting mainly in the medium-high range of typical speech frequencies, this type of panels can reduce the reflecting surface and increase instead the sound absorbing surface. Available in a wide colour range and screen printable with any images chosen by the Customer, FONOLOOK panels are 5cm thick and can be hung as pictures on the walls or from the ceiling using stainless steel wires.

The calculation of the exact quantity of sound absorbing panels to be installed can be done theoretically, however, a noise measurement test is normally recommended in order to obtain precise reverberation time measurements of the room in question. Once the panels are applied it is possibly advisable to repeat the noise measurement test to check the

achieved result.

According to the intended use of the room, optimal reverberation times are to be found in the technical literature and specific regulations, such as the recent UNI 11367 or, for classrooms, the older Ministerial Decree 18/12/1975.

It is appropriate to stress that both the UNI 11367 standard and the technical literature provide for the control and adjustment not only of reverberation time, but also of some more sophisticated parameters, such as clarity (C50) and speech transmission index (STI). These parameters allow the full investigation of voice and music transmission in particularly delicate environments such as auditoriums and theatres.

With the current state-of-the-art

technology, even if regulations exist that provide for checking speech understanding at the design stage and vast technical literature and proven experience show the importance of this design also for the purpose of acoustic comfort, the "reverberation" problem is almost always discovered only at the final stage when the rooms are used. In these circumstances, it is necessary to intervene without costly modifications to the buildings and, above all, to the existing systems. Therefore, the only possible action is almost always the application of sound absorbing elements on the free surfaces of the rooms, elements that must be wholly customisable because they are inserted into an already finished and furnished environment.





FONOLOOK

ACOUSTIC PANEL THAT SOLVES ECHO AND **REVERBERATION PROBLEMS**

CASE HISTORY



COLOURS AND SCREEN PRINTING

Fonolook panels are available in 72 shades. The lightest colours can be screen printed with images chosen by the customer. Images can be reproduced on just one panel or broken and reproduced on multiple panels for a mosaic effect. For silk screen printing please send files in .jpg format.



Frequency f [Hz]	Acoustic absorption $\alpha_{\!\scriptscriptstyle {\rm s}}$
125	0,19
160	0,29
200	0,35
250	0,57
315	0,70
400	0,82
500	0,86
630	0,98
800	0,98
1000	0,96
1250	0,97
1600	0,91
2000	0,89
2500	0,92
3150	0,95
4000	0,90
5000	0,97

WATERPROOFING CASE HIISTORY

EPDM ROOF DRAIN

Eterno Ivica's is the story of absolute specialists in waterproofing. Everything started in the Fifties from the experience of Ruggero Favero who, after driving a company specialized in laying membranes, IVICA (Industria Veneta Idrofughi Catrami ed Affini) founded Eterno SAS in 1973 and the current Eterno Ivica was born in 1980. The first products are unions for waterproofing membranes, a field the company will continue to revolutionize and perfect. Wholly made in EPDM rubber, it is the first, historical drain invented by Eterno Ivica. Unchanged over time the dovetail indentations on the flange for perfect adhesion to the bituminous membrane and the cylindrical shank for a perfect seal to the drain pipe.





Eterno EPDM rubber roof drain with a 200 mm spigot



EPDM rubber roof drain with trap



Retro fit adaptors for epdm roof drains h 200 mm



EPDM rubber extension



EPDM rubber flexible extension EPDM rubber roof drain ø 140 mm with a 600 mm flexible spigot

INTERVIEW



THE FIRST

When in 1963 Vetroasfalto presented Viapol, the first polymer-modified bitumen membrane, it introduced a revolutionary prefabricated system capable of answering the changed mechanical requests of modern buildings innovatively and effectively. Guaranteeing the constant development of research, Vetroasfalto has shown and asserted the extraordinary qualities of Viapol waterproofing membranes, producing at the same time a range of solutions capable of answering any specific waterproofing requirement.

TODAY

We have clear objectives and we want to forestall the requirements of a constantly changing market through a high level of research and specialization. This is the commitment undertaken in 1939 by Vetroasfalto, leading company in the production of thermo-waterproofing systems, and pursued throughout the years making a guarantee of reliability of its own technical strictness. In a dynamic sector with high technological content such as that of waterproofing products for industrial and building use, forestalling market expectations by tirelessly offering material updates and developments to meet any specific requirement, is a vital objective for a company at the top.

In a market where the prices of bitumen membranes are decreasing, as their value, and where the quality of the laying has drastically dropped too, we find that roofing systems have a very bad reputation. The direct effect of this tendency can be indentified in the sad statistics regarding civil lawsuits in the building sector where infiltration problems count for 60% of the disputes and 40% of the total cost of building maintenance. For these reasons nowadays the market cries out for the realization of "reliable roofing". From this comes the idea of a return to the right direction, where a "superb" product is not enough but "impeccable" installation is vital, supported by a technological solution that takes into account the growing problems related to the building itself.

In the last few years this reality has brought us to develop the concept of global system that can be summarized with the **VIAPOL MAXI PROJECT**: a return to the state of the art of waterproofing, when technological solution, product and installation merged into one.

Vetrosfalto has exploited its know-how to realize a range of innovative products that are above all environmentally-friendly. In fact all the VIAPOL MAXI PROJECT membranes use in part recycled raw materials, such as the production waste that is reconditioned and reused instead of being sent to the landfill site. This means a considerable reduction in environmental impact. Great attention is then paid to environmentally-friendly and energy-saving products: **VIAPOL**.



CASE HISTORY VIAPOL MAXI PROJECT

VIAPOL MAXI PROJECT WHITE FLASH

DESCRIPTION:

BPP elastoplastomeric polymer bitumen membrane, distilled bitumen compound modified with high molecular weight synthetic polymers, reinforcement in non-woven stabilized polyester fabric, superior finish in reflective white slate chippings.

VIAPOL MAXI PROJECT RED

DESCRIPTION:

BPP elastoplastomeric polymer bitumen membrane, distilled bitumen compound modified with high molecular weight synthetic polymers, reinforcement in non-woven stabilized polyester fabric.



INTENDED USE:

EN 13707 self-protected single layer in a non-walkable, insulated or not, covering system; self-protected finishing layer in an insulated or not, non-walkable multi-layer covering system.

APPLICATION METHOD:

<u>heat-bonding</u>, with a portable propane gas burner; <u>cold-laying</u> with bitumen-based adhesive.

HARMFUL SUBSTANCES:

the product contains no asbestos and/or tar.

TOP FINISH:

white slate chippings with high reflective power.

BOTTOM FINISH:

Uptex polypropylene fabric // polypropylene hot melt film.

INTENDED USE:

EN 13707 self-protected single layer; self-protected finishing layer in a multi-layer covering system.

APPLICATION METHOD:

<u>heat-bonding</u>, with a portable propane gas burner; <u>cold-laying</u> with bitumen-based adhesive.

HARMFUL SUBSTANCES:

the product contains no asbestos and/or tar.

TOP FINISH: self-protection with red slate fine chippings.

BOTTOM FINISH: Uptex polypropylene fabric.

FLOORING CASE HISTORY

BOSCO VERTICALE

BOSCO VERTICALE is the name of two residential towers, 111 and 80 metres high (24 floors the first one and 17 the second to be precise, for a total of 113 residences), designed by Boeri Studio (Stefano Boeri, Gianandrea Barreca and Giovanni La Varra), belonging to the Progetto Porta Nuova included in the Milan Centro Direzionale, realized by Hines Italia SGR in co-operation with COIMA.

The interior design has been trusted to COIMA Image with Dolce Vita Homes.

The distinctive features of these buildings will be the presence of over 900 tree species (about 550 trees in the first tower and 350 in the second) on the 8,900 m² of balconies. The structure was completed in the first quarter of 2012 and, after some time when the works were halted, the complex was inaugurated in October 2014.

THE IDEA

The aim of the project is the redevelopment of the Isola historical district in Milan between Via De Castillia and Via Confalonieri and consists of two residential towers, one 111.15 metres high (called Tower E) with 24 floors and the other 78 metres high (called Tower D) with 17 floors.

It is called Bosco verticale since on each tower 120 mature trees will be planted with 550 shrubs between three and six metres high in Tower E and 350 in Tower D that will help to absorb dust and smog as well as produce oxygen; the towers will therefore accommodate a total of 800 trees between 3 and 9 metres high, 11,000 among perennials and groundcover plants, 5,000 shrubs for a total of over 100 different flora species: a real reforestation project, aimed at connecting nature and town within the territory.

The distribution of the plants is not casual or just ecological, it is also ornamental so that the whole green complex can be recognized as an architectural system for the whole façade.

According to arch. Boeri the trees located on the four façades of the two buildings shall protect the whole structure from excessive sunlight during the summer months, letting light through during the winter.

They will also contribute to fight noise pollution and catch fine dust, while releasing moisture and producing oxygen.

All the trees were and shall be planted with the help of a crane that lifts the harnessed plants from ground level up to balconies to even 110 metres in height and their growth, water requirements, pot size and anchoring shall be monitored by sensors. Groundwater shall be used for watering through a centralized watering system with sensors in the beds and containers holding 5 cubic metres of soil, to warn when moisture reaches very low

levels.

Moreover, wind and solar systems will help, together with the

above-mentioned microclimate, to increase the degree of energy self-sufficiency of the two towers.

THE BUILDING

Building of the two towers started between the end of 2009 and the beginning of 2010, with the laying of the foundations. Construction went on very slowly between the middle of 2010 and the beginning of 2011: the towers grew of just five floors, with the core reaching the seventh floor. Despite this, construction continued during 2011 and on 23 July the towers reached the tenth floor to get to the fifteenth in September of the same year. The structures were completed at the beginning of 2012. The works were stopped on 22 April 2013 when the company ZH from Alto Adige surrendered to debt and filed for automatic stay. The contract was then passed to Colombo Costruzioni that promised to finish the two towers within 6/7 months. The Bosco Verticale was inaugurated in October 2014.

AWARDS

On 19 November 2014 the Bosco Verticale won the 2014 International Highrise Award, a biennial international competition for the most beautiful skyscraper in the world.

The building has been selected among 800 skyscrapers from all over the world, beating the finalists Rem Koolhaas, Jean Nouvel and Steven Holl.

The same Boeri has stated:

"I'm very happy because the prize awarded to Bosco Verticale is an acknowledgement of innovation in the field of architecture. It is an invitation to think of architecture as an anticipation of the future for all of us, not only as the success of a style or language. The Bosco Verticale is a new idea of skyscraper, where trees and humans coexist.

It is the first example in the whole world of a tower that enriches its town with flora and fauna biodiversity. I am happy for Milan, for Expo, and wish to thank those who have promoted and supported our project, starting from Hines Italia and the associations of the Isola neighbourhood."

The International Highrise Award, a prize created in 2003 in Frankfurt, recognizes the criteria of sustainability, design and quality of internal spaces, as well as the integration in the urban setting, of buildings reaching at least 100m in height and finished in the last two years (in fact it takes place every two years).

Source Wikipedia and Source www.econote.it http://www.econote.it/2013/02/27/il-verde-tra-i-grattacieli-bosco-verticale-a-milano/





dorin 5 ETERNO WCA'S INTERVENTION

In 2013 the outdoor floor supports produced by Eterno Ivica won various awards in the five continents: helping such a wi- mapped, they are undoubtedly vital ingredients for successful were selected to raise the ceramic covering of the balconies of both towers, for a total of about 70,000 pieces.

The important reference conferred to the "Support" product has

de-ranging project confirms the technical nature of the Eterno Ivica supports, unique as to performance and range completeness, the only ones to be certified, constantly tested and LEED

systems.

Alberto Cocco

PEDESTAL











FLOORING

RICCARDO VALENTE

Commercial Director Listotech

LISTOTECH® DECKING QUARTZ

LISTOTECH[®]: the name of a product and of the company that makes it. It is a hint stating an ambitious entrepreneurial vision born of the awareness that an innovation capable of opening

a new design and commercial chapter has been introduced into the market.

Listotech srl is born from Precompressi spa, a leading company in the design and manufacture of prestressed industrial components for over sixty years. The 10,000 sq.m. production area has modern technology.

Initially Listotech makes its debut as a coating manufacturer, but it has in its DNA the know-how and talent of Precompressi Spa, a company that from the Fifties to date has conquered a leading role in the design and production of industrial prestressed elements, and that's why in technology it's one of its kind; thanks to the high-tech harmonic steel core and Adaxite material composition, LISTOTE-CH[®] holds the secret of an extremely advanced technology: prestressing.

Known for over a century and since then symbol of great architectural works, LISTOTECH[®] revolutionizes its application range, taming and enclosing it in thin elements, only 3cm thick.

Thanks to prestressing, stone comes to life showing extraordinary flexibility. Carved into very high-performance decorative elements with a top length of 4 metres, LISTOTECH[®] staves are designed to meet the most rigorous aesthetic and design requirements of outdoor architecture.



What is Listotech's position in the flooring sector?

Listotech's position is medium-high, following the architect's design base after an accurate selection of the concerns in the area. **What are the main features of your solutions/products?** Listotech's main features are: 7 laying solutions for any type of design; 7 different textures in 6 colours and 4 lengths. Listotech does not splinter, bend or warp, fade or grow mouldy. **Why is Listotech defined as innovative?**

SWe are the only ones to make a stave in Adaxite (quartz and marble) using prestressing.





CASE HISTORY LISTOTECH and Adaxite Ars

LISTOTECH[®] is the first flooring and covering system consisting

of linear modules in ADAXITE reinforced by harmonic steel braiding that, prestressed, compress and compact the material guaranteeing its performance in terms of resistance, elasticity and flexibility otherwise impossible for a board measuring 3cm in height, 10cm in width and 4 metres in length maximum.

The high-resistance to sulphates of the staves fights the degrading action of the most infiltrating atmospheric agents and the climatic aggression of coastal areas.

LISTOTECH can be laid as flooring with the floating method (on fixed or adjustable feet) or the permeable method (on sand, gravel and lawn) and on the wall. The product can be cut and finished on site with a hose fitted with a diamond disc and a water saw.



What technical problems are there regarding the product?

Listotech presents itself to the market as the best and only alternative to wood and the problems connected to this material (splinters, breaks, warping, twisting, greying, total renovation after 5 years). We manufacture alternative solutions.

What are Listotech features?

Listotech is a full-body, frost-proof, R12 non-slip, class C, fire-retardant waterproofing (polymerization treatment). It can boast high safety performance, resilience and unlimited life cycle even without any maintenance.







WOODECK

CASE HISTORY

It is a challenge that's been going on for centuries: using raised wood planks to support or repair buildings. And the difficulties are always the same: managing the various heights, ensure final strength and levelling of the finished floor. No more problems. Woodeck Floor System is the final solution, designed and tested to bring to different raised levels any type of plank: wood, wpc, plastic, ceramic, cement and self-supporting composite material. It is a system consisting of aluminium joists and supports equipped with special rotating clips, that allows to create a real raised floor made of planks. A real revolution for both installers who will appreciate its simplicity and laying speed, and the users who will enjoy the aesthetic and functional result.





OORING TERVIEW

LORENZO BRAGLIA International Tiles Agency



How was International Tiles Agency born?

International Tiles Agency was born in 1982 from an idea by Osvaldo Spadoni, the current Managing Director. Initially the business hinged on representing Italian ceramic manufacturers: the company's mission then continued to target foreign markets, promoting the direct export of Italian excellence in the sector of ceramics, natural stone and marble/granite.

Forerunner of market trends since 1980, ITA promotes the sale of pedestrian flooring integrating it for this purpose among its principals that include the well-known SIGMA Tagliapiastrelle, at the moment boasting the record of best selling machine in Australia.

Why was the Australian market chosen as reference?

The strategic choice of Osvaldo Spadoni, former Sales Director of the historical company "San Giuseppe di Sassuolo" was to target a virgin country at the time: Australia.

This was quickly conquered by Spadoni flanked by his area representative: it proved to be a strategic landing site spreading the news of the excellence of the Italian ceramic area.

As the same Spadoni maintains: "35 years ago Australia was a country still to build and Italian immigrants that had dedicated themselves to the ceramic industry wanted only Italian tiles. Moreover

the quality of life and climate were ideal as work environment and amply compensated for the long trip one had to embark on to get there. A few years later it was decided to start a new relationship also with New Zealand and in the boom years of the "Asian tigers" we supplied various projects in South-East Asia."

What are the competitive edges of your company?

The competitive advantages of our company are proven by the long experience, credibility and commercial reputation acquired on the field and by the constant research for innovative and high performance solutions. Moreover, the aftersales service that is often considered by many an unnecessary characteristic, is fundamental for us in order to create and strengthen meaningful, professional and lasting B-to-B relationships.

What are the products the Australian market is most interested in?

Unlike almost all of the Western economies, the Australian economy has not been affected by the recession; the reasons for this success are to be found in the dynamics of the import-export of raw materials from and to China and India.

This trade has also favoured the entry of the aggressive Asians into the "land of kangaroos", drastically but not definitely changing the economic balance, above all in building.

The first to pay the price have been European ceramics, Italian in particular, that, from a position as queen of the market, in the last 10 years have lost a large market share to China, Malaysia, Thailand and Indonesia.

This said, ceramics, machinery and laying tools still play a part where quality, design and high-level technology are required.

How has the Australian market developed? What is the forecast for 2015?

Introducing and promoting Eterno Ivica products into Australia was not simple, in spite of the success that the historical Italian company has enjoyed for some time in New Zealand.

The Australian market is generally conservative and traditional, that is cautious and biased against change: we have had to display perseverance, professionalism and dedication to advertise the advantages and opportunities offered by the Pedestal line to the ceramic sector and the raised floor market.

It has taken over a year's work to educate the professionals about the features of the Pedestal line: this training has made it possible for Eterno Ivica substructures to enter very many showrooms all over the country.

Towards the middle of 2014 we started spreading the culture of the Liquid line, another branch of the Eterno Ivica production related to waterproofing with liquid membranes and twocomponent cements.

Today the project, managed by the most important construction company with offices throughout Australia, is an important reference that witnesses the superb complicity that Eterno Ivica engineers manage to bestow their simple but extremely effective products.

The numbers obtained in 2014 have exceeded all expectations and for 2015 the commitment remains maintening the turnover high, retaining customers, increasingly more in need of technical support; the Pedestal and Liquid lines will surely be drivers of the positive trend.



PEDESTAL

THE ONLY ADJUSTABLE SUPPORT FOR RAISED FLOORS WITH A NOISE HEAD SELF-LEVELLING IN BI-MATERIAL

The Pedestal system is surely the top of contemporary flooring; it is based on a series of modular and adjustable supports that adapt to any type of floor simply and safely.

To guarantee an even and elegant floor without changing the existing structure radically and eliminate humidity, water infiltration, cable or pipe problems at the root, always allowing easy and quick inspections.

ETERNO, the system that changes your life.

ADVANTAGES:

- Self-levelling head that compensates automatically for gradients up to 5%
- Adjustable from 28 to 550mm with finished floor thanks to the exclusive adjusting key
- **320** cm² smooth support base
- Wholly recyclable
- Resistant to temperatures from -40° to +120°C;
- Resistant to acids, ageing and UV rays
- Can be used with any self-supporting outdoor flooring
- Protected by international PATENT
- Head with top part in anti-noise and non-slip rubber
- Easily removable fins





A COMPLETE RANGE FOR ALL HEIGHT REQUIREMENTS from 28 mm to 550 mm

7

EXPO 2015





FROM 19 TO 24 JANUARY 2015 **MONACO - GERMANY BAU 2015**





PEDESTAL+ACUST





FROM 29 JANUARY TO FEBRARY 1 2015 BOLZANO **KLIMAHOUSE**









FROM 26 FEBRARY TO 8 MARCH 2015

BRUXELLES - BELGIUM

BATIBOUW



PEDESTAL+ACUSTICA+LIQUID



PEDESTAL



MADEexpo

FIERA MILANO





ACUSTICA BY ETERNO<mark>ivica</mark> SILENZIO AD ALTA FEDELTÀ



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