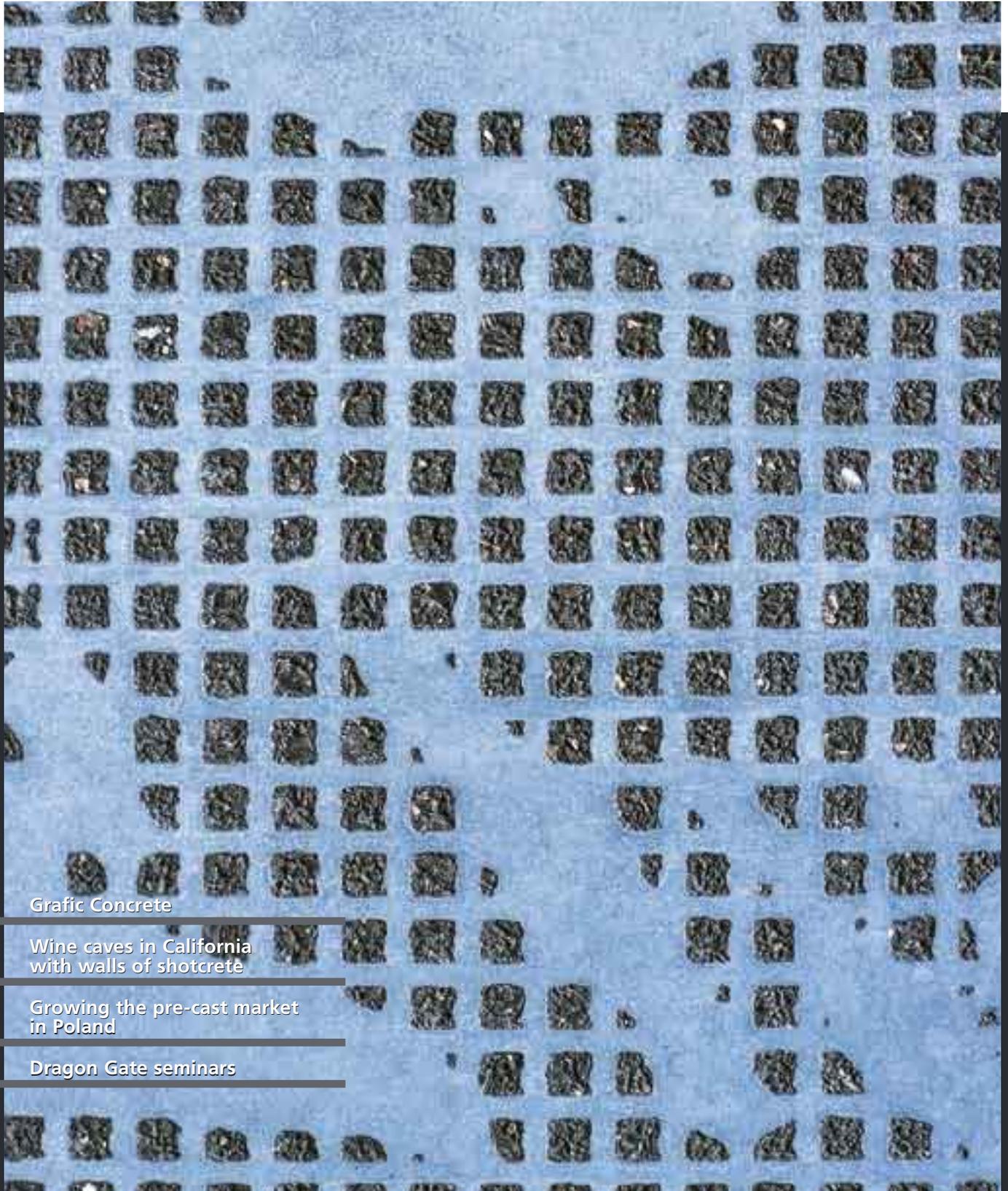


# THE WHITE SITE



AALBORG WHITE®

February 2006/1



Graphic Concrete

Wine caves in California  
with walls of shotcrete

Growing the pre-cast market  
in Poland

Dragon Gate seminars



AALBORG WHITE®

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AALBORG WHITE® is white cement – made from nature's own raw materials, refined by supreme technology, and used for beautiful and functional solutions.

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Graphic Concrete is a patented technology that allows patterns and images to be cost effectively and safely set in concrete. The technology opens new opportunities for the use of white and coloured cement stone and coloured aggregates.

This unique technology allows textures, raster patterns, repeated patterns, written text, or even sharp images to be created on concrete surfaces. The technology was originally developed for exterior facades and interior walls. However, it can also be used in the production of environmental concrete constructions, concrete slabs and individual works of art.

Graphic Concrete is produced at prefabrication plants using a special retarder membrane. The pattern is created on the surface of the concrete by using the effect of the contrast between the fairface and the exposed fine aggregate surface.

The membrane is 3,100 mm wide and any length can be supplied. The membrane can therefore be used in the production of 3 meter high elements without requiring membrane joints. Higher elements can also be manufactured by joining membranes together.

*Continues page 4*



# raphic Concrete



*Textures, raster patterns, repeated patterns, written text, or even sharp images to be created on concrete surfaces...*



### **Wide range of possibilities**

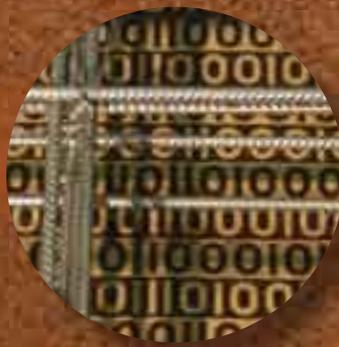
Designers and architects can select surface patterns from an existing range or they can design a unique custom pattern or image. The pattern or image can also be toned by selecting the colour and exposure depth of the cement stone and the colour of the exposed aggregate. Coloured cement and aggregates are widely used. The technique also works well with conventional grey and pure white concrete.

Graphic Concrete elements are cast at a prefabrication company near the construction site. Use of the membrane in the factory environment is relatively simple. There are, however, some conditions that must be met, and special work methods that need to be applied to ensure productivity and high quality. Personnel from Graphic Concrete Ltd provide training in the use of Graphic Concrete technology and membranes to factories who have not previously used this technique.

The competitive cost levels and production viability of Graphic Concrete are advantages which make the process affordable and therefore more likely to be used. A further advantage is that solvents used in the retarder are evaporated off. There are therefore no safety issues which would prevent usage of the technology by precasters.

Catalogue patterns can be ordered directly from Graphic Concrete. Custom patterns and pictures should firstly be sent to Graphic Concrete to check manufacturability. The pattern collection and instructions for designers can be found at [www.graphicconcrete.com](http://www.graphicconcrete.com).

Graphic Concrete Ltd has primarily operated in the domestic Finnish market. However, an internationalisation process has been started and cooperative partnerships have been established in Scandinavia and in some other European countries. For further information please visit [www.graphicconcrete.com](http://www.graphicconcrete.com).





*What do northern california grapes  
and shotcrete have in common?*

**Fine wine,  
of course!**





The California Wine Country brings to mind hillsides carpeted with lush vineyards and Californian wineries. The O'Shaughnessy winery, like many in the region, store their aging barrels underground in a custom made wine cave. For the owner, Betty O'Shaughnessy, it was important to get away from the industrial look. And she's pleased with the friendly atmosphere that the modest lighting and white cement shotcrete finish gives. This impressive underground space is 8 metres wide, has a ceiling height of 6 metres and when standing in the main chamber, the soft lighting and curved structure give 'a feeling of infinity'.

### Ideal conditons

Wine caves are ideal for aging the region's most famous product. The caves provide a constant or near constant temperature of between 13 and 15.5 degrees C and have relative humidity levels of between 70 and 90 percent. Underground storage is also more energy efficient and more secure than surface warehousing. Wine is typically aged from one to three years in oak barrels and where barrels are stored above ground, more than 15 litres of wine a year can be lost through evaporation. Underground storage will usually limit evaporation losses to around 3.5 to 4 litres. Another benefit of underground wine storage is land optimization. Putting part of the operation underground allows the vintner to maximize grape production and to minimise the impact of installations on the landscape.

### Unlimited possibilities of expression

Wine caves are in principle shotcrete lined tunnels (concrete sprayed at high velocity). Shotcrete is the product of choice because formwork is not required, because it can be applied relatively easily



The O'Shaughnessy winery, California.

and because it makes storing wine underground an attractive and cost effective option for vintners. Applying a white cement shotcrete finish coat to the cave's interior gives a more reflective finished surface and allows a wider range of colours to be used. Owner's can choose integral colours and special sands to adapt the look of the final coat to their preferences. Finishes range from rough, unaltered shotcrete to smooth plaster like textures.

### Future perspectives

The outlook for underground shotcrete applications is good. Vintners are demanding more complex underground structures with wider and taller spaces so that complex mechanical systems and large storage tanks can also be located underground. Entire wineries have been

constructed in caves and more traditional wineries are also opting for underground high-end wine libraries and spaces designed for entertainment. No matter what the layout, white cement will play a significant role in constructing these modern day wine caves.

### Facts:

- Project:* O'Shaughnessy Vineyard, Wine Storage, Angwin, California, USA
- Description:* Construct Underground Wine Storage Cave for Napa County wine producer.
- Contractor:* Glen Ragsdale Underground Associates Inc., Angwin, CA, USA
- Geotechnical Engineering:* Condor Earth Technologies Inc.
- Shotcrete Supplier:* Harold Smith & Sons



Access portals lead to the main chamber.



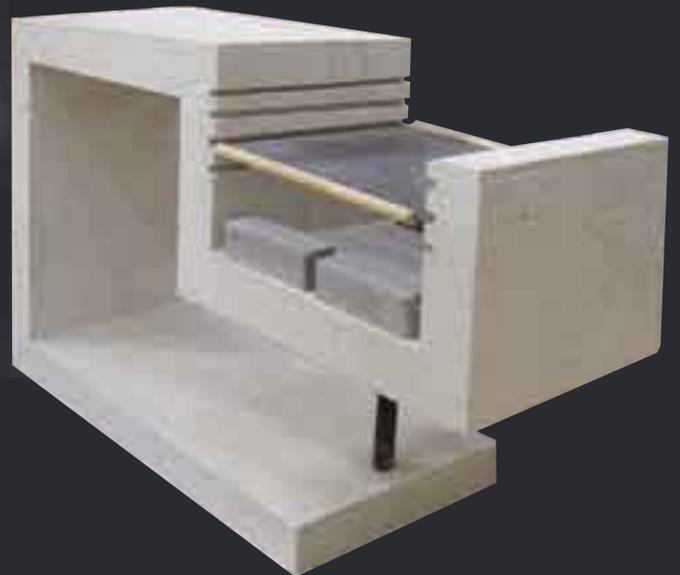
Soft lighting washed up light-coloured shotcrete finish.



*Beautiful double doors greet visitors at The O'Shaughnessy winery.*



The practical goal of the workshop was to design, make the moulds for, cast and demould a barbecue grill.





The young people showed enormous commitment and attacked the assignment with great enthusiasm.



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## Cooperation and mutual understanding

In cooperation with Aalborg Portland and Unicon, the Centre for Concrete Education held a four-day concrete workshop in the autumn of 2005. Around 270 newly admitted students and architects participated in the workshop. The goal was to open students' eyes to the many exciting opportunities within concrete usage and to emphasize that successful construction of a building requires good cooperation and mutual understanding between all professional groups.

### More than one goal

The practical goal of the workshop was that the students, split into groups, were to design, make the moulds for, cast and demould a barbecue grill which was to be cast in white concrete, sponsored by Unicon.

A number of lectures were held on concrete technology, architecture/aesthetics, barbecuing, innovation, design, Le Corbusier and a lecture on 'Concrete in bridges'. Participants from all professional areas were then subdivided into groups of 11 students, who then carried out the design and planning stage of the concrete barbecue. They then built the moulds for the barbecue. Unicon supplied the white concrete for casting the 24 different barbecues using three concrete truck mixers. They were demoulded on the last day of the workshop and the wonderful results were judged by a committee of judges consisting of engineers, architects, designers and cooks. The School and Culture Alderman in Aalborg, Niels Bell, presented diplomas for the 3 best grills and the event was rounded off with barbecued sucking pig and draught beer.

### Commitment and enthusiasm

The young people showed enormous commitment and attacked the assignment with great enthusiasm. This arrangement has without doubt contributed to creating a large number of future ambassadors for concrete as a construction material.

The workshop also achieved a certain amount of positive media coverage. A live telephone interview was broadcast on Radio Nordjylland and a short article was run on TV Nord's news. The event was also mentioned in a number of profession magazines and news sheets and of course gets a mention on the web sites of the institutions and companies involved.

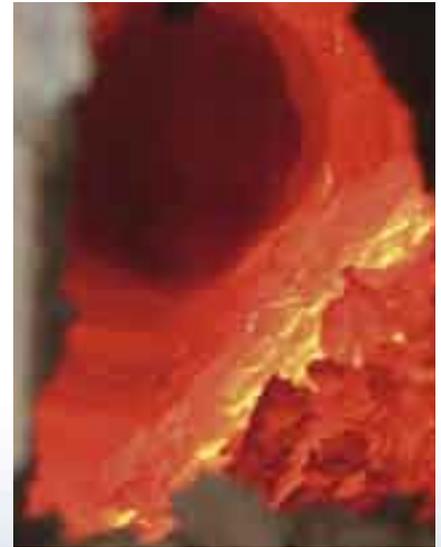
## Upgrade of China plant

In 2004, Aalborg Portland A/S acquired a minor Chinese white cement plant around 700 km upstream of the Yangtze River. The plant was put into operation on the existing production platform in early 2005, based on Chinese technology.

An upgrade project was started in 2005, which will be finalised in early 2006. The project has been carried out using the assistance of a local engineering company and engineers from RDC. The upgrade project transfers and implements technologies that have been successfully used at other AALBORG WHITE® plants around the world. The

focus has been on improving product quality to the high standards, which the AALBORG WHITE® brand is known for, and to ensure that all customers are supplied a superior product. Energy consumption has been reduced and production capacity increased.

Applying the know-how of the AALBORG WHITE® Research and Development Centre means that Aalborg White Anqing Co. Ltd. is ready to supply high quality white cement to the Chinese market at reduced environmental impact levels.



# Growing the pre-cast market in Poland

The Tool box, which is a part of AALBORG WHITE®'s SEE FEEL EXPERIENCE communication universe, is subdivided into 3 sections, each illustrating in a different way a number of white concrete options. The first section shows a selection of colour options (see with your eyes!), the next section surface options (feel with your hands!) and the last section which is the experience section. The experience section contains, in addition to concrete samples, a selection of complementary building materials such as steel, aluminium, glass and wood and a bottle of water, so participants can experience how the selected concrete samples look in wet weather.



In November 2005, Aalborg Portland Polska together with AALBORG WHITE® Technical Team, gave a presentation to the Polish Concrete Producers Association in Warsaw.

The Association, which was established 10 years ago, includes all leading pre-cast producers in Poland. The white pre-cast concrete segment in Poland is expected to grow substantially in the coming years and Aalborg Portland Polska has therefore focussed on marketing and communication activities within this segment that promote understanding and dialogue.

The presentation, which was titled 'AALBORG WHITE® – a world of possibilities', was divided into three parts. The first was a general introduction to AALBORG WHITE® cement. The second section looked at the opportunities for using AALBORG WHITE® cement in pre-cast elements and the third and final section covered infrastructure. The presentation was received with great interest by the audience, which consisted of 30 people and included most of the decision makers in the pre-cast industry.

SEE FEEL EXPERIENCE tool boxes and other tactile communication elements were used to generate a dialogue and to emphasize and enhance the content of the presentation.



SEE FEEL EXPERIENCE tool boxes and other tactile communication elements were used to generate a dialogue and to emphasize and enhance the content of the presentation.

The presentation was very well received and many participants expressed an interest in working more together in the future. Further initiatives have been implemented in cooperation with the

Association to develop the pre-cast segment market in Poland for AALBORG WHITE® cement.

# No free perfume samples, but still worth it!



'The Dragon Gate Seminar. Well, what can we say? We must admit that we were a bit sceptical at the start and we were struggling to find the relevance of the seminar', says Erik Petersen, managing director, Aalborg White Asia. He continues: 'We couldn't see how new concepts such as branding, promotions and a passion for the product could be applied to the sale of cement, a well known commodity with a long history, sold to customers in a well established industry. Most of us associate these new concepts with the fashion industry and some of the female participants were almost expecting free perfume samples and handbags.

However, as the seminar progressed, everything fell into place. AND IT WAS ALL WORTH IT! Even for cement people and even without free perfume samples. We are now convinced that the SEE FEEL EXPERIENCE communication concept is the best way to promote the use and application of white cement. Applying the principles we learned at the seminar means that we have a common basis for the promotion and sale of our product. This will make our product and company unique and will establish a common approach to customers and markets irrespective of which market or culture we are operating in. We are sure that what we learnt at the seminar will benefit the company. However, we are also convinced it will also benefit our customers, as we now know how to add value to the product instead of seeing concrete as just a commodity.

The challenge ahead is to successfully follow up the new marketing concept and to transfer the concept to our agents and distributors so that even more value will be transferred to our customers.'





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## Awarded Excellence in the Brick and Block Awards 2005

**by Masonry Contractors  
Association NSW Inc.,  
Australia**

Aalborg White Cement (Aust) Pty Ltd was the winner of the annual 'Ornamental Brick & Blockwork' category in the Excellence in Brick and Block Awards 2005. The award was for the Wentworth Falls Upgrade project located in New South Wales, Australia. The project used Aalborg Bricklayers® White Cement to highlight the natural sandstone finish. Bricklayers® White was also specified because of features such as extended working time, easier clean up and that no additives such as plasticiser or hydrated lime are required.

Aalborg White Cement (Aust) Pty Ltd was nominated in 10 out of the 46 categories by the Masonry Contractors Association NSW Inc. and Aalborg Bricklayers® White Cement was represented in over 20% of all masonry projects nominated for awards.



*Aalborg White Cement (Aust) Pty Ltd was the winner of the annual 'Ornamental Brick & Blockwork' category in the Excellence in Brick and Block Awards 2005.*



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## Strengthening the future growth potential and synergies of the Aalborg Portland Group

With the purpose of strengthening the future growth potential and synergies of the Aalborg Portland Group, the group has from 1st January 2006 been divided into three new business areas, Aalborg Portland White cement, Aalborg Portland Grey cement, and Unicon Ready-Mix concrete. All activities within the three business areas will be directed by a corporate company, Aalborg Portland A/S, with Søren Vinther as 'President and CEO'.

Søren Vinther states: 'From the beginning of their ownership our new Italian owners have expressed great respect for

the results already achieved by Aalborg Portland and Unicon and it is my firm belief that with the new structure we will get the opportunity to further develop the total business through organisational growth as well as through acquisitions'.

In the corporate company, Jørgen Norup, 'Vice President, Sales and Marketing (cement)' will have the responsibility for international sales and branding.

Søren Vinther will continue to lead the business area White Cement (Aalborg Portland White A/S) until further notice,

and Henrik Hougaard has been promoted 'Director, Sales Europe & Americas'.

Aalborg Portland White A/S is a 100% owned company by Aalborg Portland A/S.

For additional information please see [www.AalborgWhite.com](http://www.AalborgWhite.com) or contact Jørgen Norup, tel. +45 9933 7737, or [nor@AalborgWhite.dk](mailto:nor@AalborgWhite.dk).