


THE WHITE SITE



AALBORG WHITE®

December 2005/4



Culture and research
in white concrete

The world's northernmost
theatre in white concrete

Improved aesthetics for
Polish engineering student

Living the Brand



AALBORG WHITE®

hbn@AalborgWhite.dk

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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Announcement



The building blends with the immediate landscape – you experience that the boundary between the outdoor and indoor is erased and that nature is drawn into the building.

Culture and research in white concrete construction

The Technical University of Denmark’s research park has gained a new beautiful building, which is constructed in white concrete based on AALBORG WHITE®. 105 companies are now housed in the Scion-DTU research park and now all have access to the new joint culture, conference and sports centre.

In harmony with nature

CUBO Arkitekter A/S has, in a magnificent way, thought through and designed a building that blends with the immediate landscape – the small lake, the trees and the terrain. When you approach the building, walk around it and use the building, you experience that the boundary between the outdoor and indoor is erased and that you experience a sensation that nature is drawn into the building.

A mix of in-situ and precast concrete

All these effects were made possible using white in-situ cast concrete for the facades and internal ‘street’ inner walls and floors, columns, beams and other inner walls of white element concrete. This mixture of in-situ and element concrete is interesting and successful both technologically and aesthetically.

Continues page 4



– nature is drawn inside...

*The mixture of in-situ
and element concrete is
interesting and successful
both technologically and
aesthetically.*



Facts:

Building owner:

Scion-DTU AIS

Architect:

CUBO Arkitekter AIS

Main contractor:

MT-Højgaard AIS

Consulting engineers:

Cowi AIS

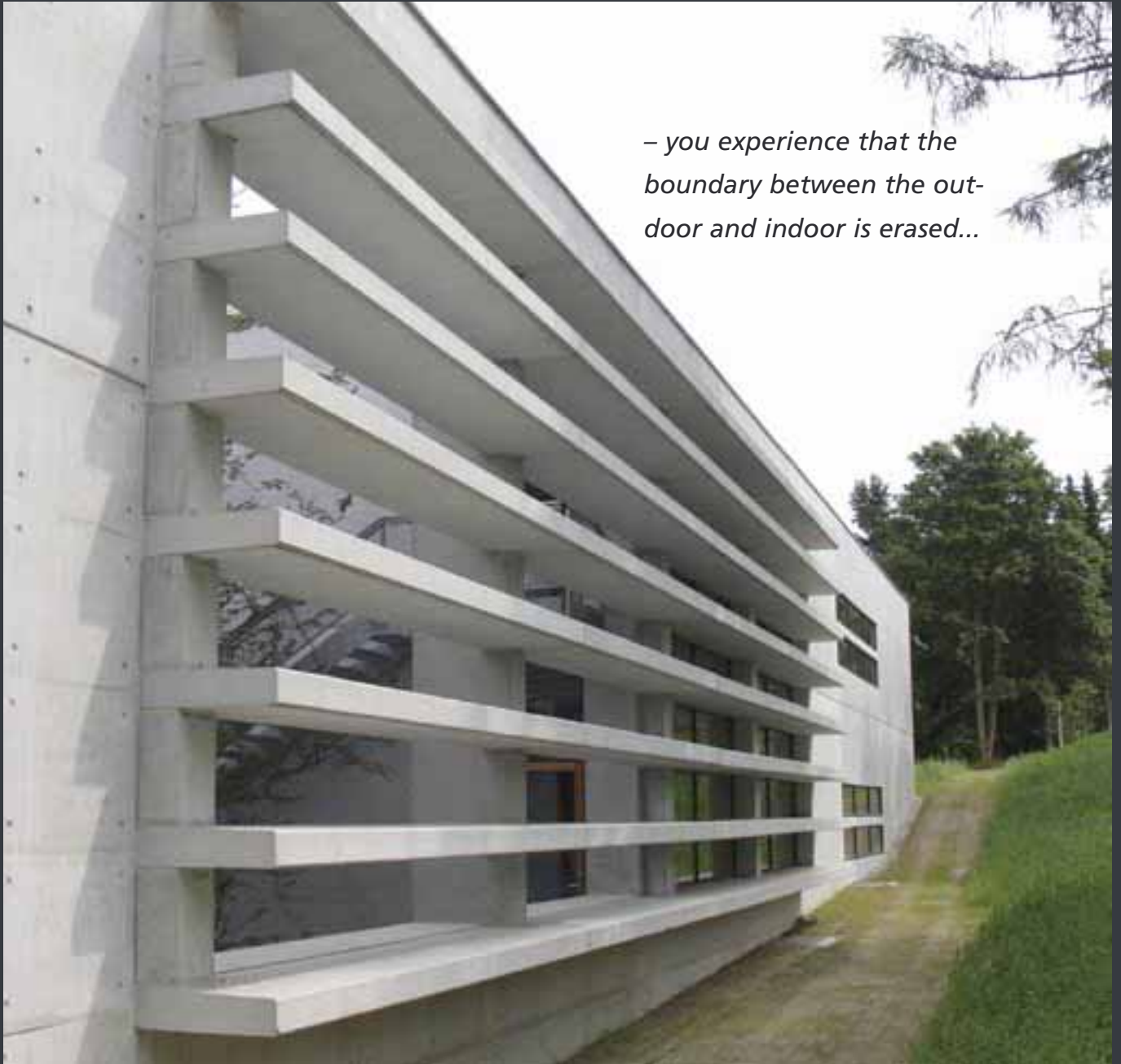
Area:

4,400 m²





*– you experience that the
boundary between the out-
door and indoor is erased...*



The world's northernmost theatre in white concrete





The metallic look of the outer walls adds an exciting effect to the building and contributes to good incorporation into the environment.

Continues page 10

Hålogaland Teater in Tromsø



The beautiful surroundings of the Hålogaland Teater.



The interesting interplay between wood, metal and white concrete can be clearly seen.

The recently completed Hålogaland Teater in Tromsø, Norway (at a latitude of 69° north) is north of the polar circle. It is a theatre, which has been at the very top of the wish list of the Municipality of Tromsø for 20 years.

Kristian Øvernes, technical director in Bjørn Bygg which is the parent company of Færdig Beton that has supplied the concrete, shows us around. In total 3,500 m³ of concrete has been supplied. 350 m³ of this was white concrete which has been partly used for the foyer, constructed using on-site cast white concrete, and partly for the area in front of the theatre. The concrete is ready mixed at the building site and consists of white cement with local aggregates and titanium dioxide. The formwork was untreated wood shuttering. The foyer is light and friendly with a wonderful incursion of light. The Dutch bricks of the outer walls give a 'metallic look'.

The Municipality of Tromsø has 64,000 inhabitants and is in strong growth, due to the university which has more than 8,000 students. The most important industries in the municipality are the oil industry and the fish industry. There is a net population influx into the city of up to 1,000 people a year, which results in high levels of housing construction. Tromsø, which is also called 'The Paris of the North', is a popular port of call for cruise ships. In the summer of 2005, over 100 cruise ships called into Tromsø, which also makes its mark on the city's character. There is also a lot of activity on the cultural front. One of the events in the local cultural centre is a culture school for children and a new large library was also recently inaugurated. So there is no doubt that the new theatre, which can seat 400 and which has one of Europe's most advanced stage equipment, will be well received in Tromsø.

An interesting fact about the theatre is that the theatre's name, as for all public buildings, is both in Norwegian and in Sami. Even though all Samer are today integrated in Norway and speak Norwegian, a great deal is done to preserve the Sami culture.

Facts:

Name: Hålogaland Teater
Construction year: 2005
Architects: Vulkan Arkitekter
Gross area: 5,150 m²
Main contractor: Bjørn Bygg AS

The white side wall in the foyer has a wonderfully decorative expression and the incursion of light into the foyer gives a feeling of lightness.





IS WHITE
CONCRETE
ALWAYS
RIGID AND
STRAIGHT?

IS WHITE
CONCRETE
ALWAYS
UNIFORM
AND COLD?

IS WHITE
CONCRETE
ALWAYS
SIMPLE AND
MECHANICAL?

Facts:

*Structure: Saint Exupery TGV
Station Lyon, France*

Architect: Santiago Calatrava



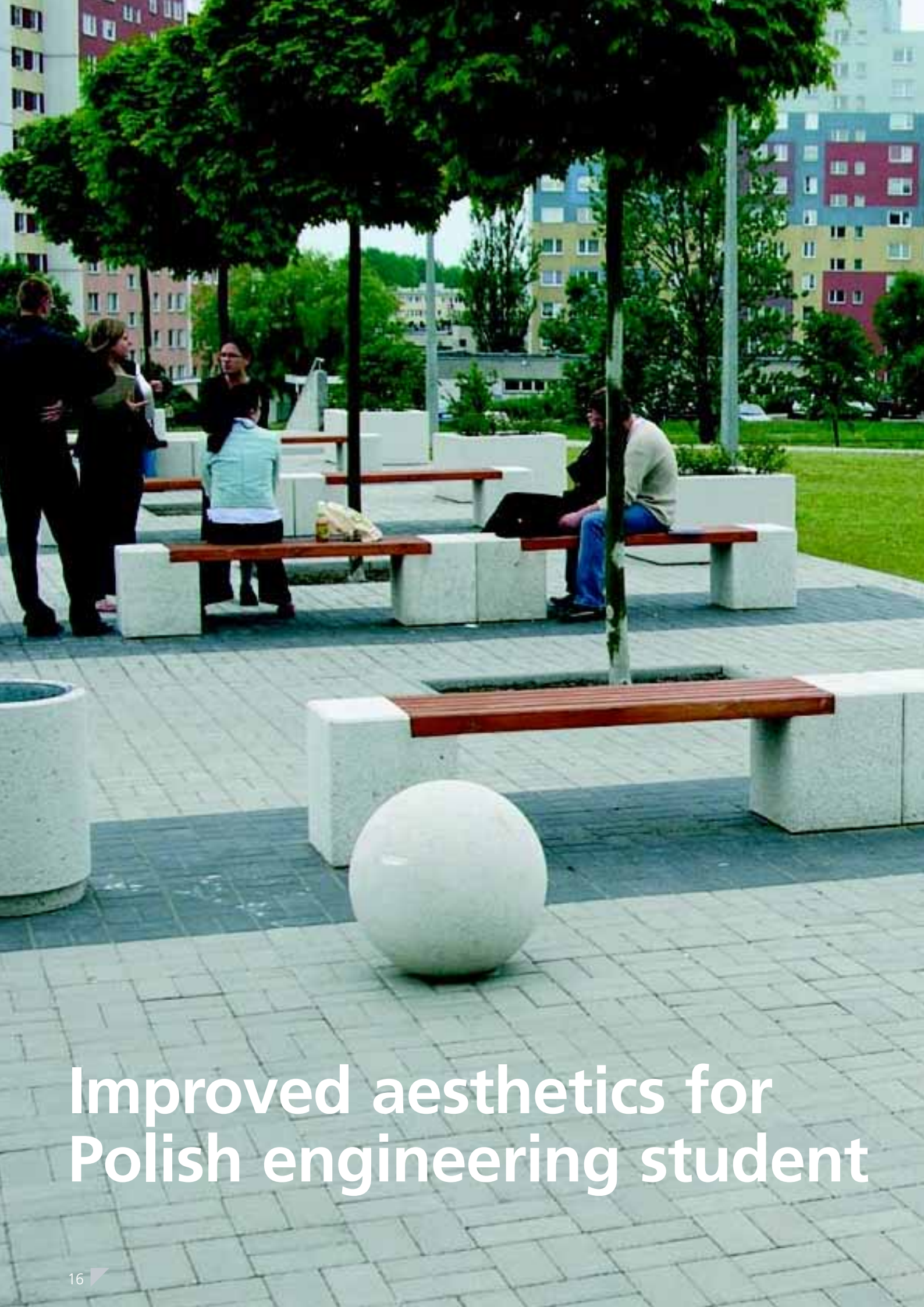
CAN WHITE CONCRETE
BE **ORGANIC**?

CAN WHITE CONCRETE
BE **INTIMATE**?

CAN WHITE CONCRETE
BE **FLOWING AND
NATURAL**?







Improved aesthetics for Polish engineering student



Format received an order from Koszalin's Engineering College for the building's front square and adjacent areas.

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The company Format is based in Koszalin, north west Poland. Format began activities in 1991, first as a producer of small road elements which were supplied throughout the region. The products were very well received by the company's customers, which led to Format also developing other concrete products.

Format currently not only supplies a range of paving stones, kerbstones, and concrete blocks, but also a wide range of urban architectural elements produced using exposed concrete technology. These include lawns, benches, urns and flowerpots. Format is also able to design and produce to customers' individual requirements.

When Format received an order from Koszalin's Engineering College for the building's front square and adjacent areas, they started by thinking about what could be the very best solution. Format finally suggested white elements in exposed concrete technology. They started by producing sample elements

to show to the buyer, but discovered a problem with production uniformity. However, when they tested a sample of AALBORG WHITE® cement, the result was good and the contract could be finalized. Format produced several architectural products such as benches, waste containers, urns and more unconventional objects such as balls (see photos). AALBORG WHITE® cement means that Format's products are homogenous with a stable snowy-white colour. AALBORG WHITE® cement also gives Format high durability products with good strength parameters.

'Format' believes that this market will continue to grow in the future and their innovative use of white cement gives good grounds to expect great things to come in the future.

Urban Concrete Art



The AAUMU-sculpture, created by Vesa-Pekka Rannikko.

The 'Urban Concrete Art' event is a part of the Finnish Concrete Association's 80th Anniversary festival. The concrete art event aims to bring together artists, concrete experts and towns and cities to develop and benefit from cooperation and know-how. Towns and cities have an opportunity to acquire, at reasonable cost, durable works of art designed by acknowledged artists, with a quality assurance from the Finnish Concrete Association. The concrete industry can also take advantage of new innovations, to create new applications for concrete.

The artists who have agreed to participate in the event include Martti Aiha, Federico Assler, Marja Kanervo, Pertti Kukkonen, Kimmo Pyykkö, Vesa-Pekka Rannikko, Hannu Siren and Veijo Ulmanen. The drafts of all the works, which were presented in issue 1/2005 of the *Betoni* magazine, were completed at the start of 2005.

Torpparimäki Näsinpuisto Park in Helsinki presents Vesa-Pekka Rannikko's sculpture AAUMU.

AAUMU is an abstract sculpture cast in body coloured concrete, which was commissioned by the Art Museum of the City of Helsinki. It combines precise graphic elements etched onto a randomly created soft organic mass, resulting in the representation of a strange body which has fallen onto the park sand from another dimension.

The mould for AAUMU was milled in glued together styrofoam blocks. A void was generated inside the basic shape, which was cast in white concrete, to give lower weight and removal of hydration heat. The upper part was closed with yellow concrete bordered by a blue-grey concrete ring. The size of the finished sculpture is ca. 2.5 × 2 × 1.3 m.

It was placed in the Torpparimäki Näsinpuisto Park without a base, embedded slightly into the ground.



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The upper part was closed with yellow concrete bordered by a blue-grey concrete ring.

All photographs in this article are taken by Maritta Koivisto, Betoni.

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Spray mortars based on AALBORG WHITE®

The mortar segment is the largest application area for white cement, render mortars being one of the most relevant applications. A trend has been developing away from manual application of renders towards spraying, application areas including repair mortars, structures with special geometry, difficult access areas and special products such as furniture.

A project was started at AALBORG WHITE® Research and Development Centre to study pumpability and sprayability of spray mortars based on AALBORG WHITE®. The goal of the project was to acquire equipment, establish test facilities and study the parameters governing flowability, adhesion, build-up capacity and rebound material (material that bounces back during spraying). The investigations were conducted using a worm type pump, which is the most commonly used for this



Fine sandpaper or rough broken rock. The texture of AALBORG WHITE® based shotcrete can be varied by adjusting spraying technique and mortar composition to match individual application requirements.

application and the type that sets the most stringent requirements for mortar flowability. The goal was successfully achieved. We have proposed some basic recipes for spray

repair mortars and renders based on AALBORG WHITE®. We, furthermore, are able to support our customers in the development or improvement of spray mortar recipes.

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Marie Curie – research training network

Imagine a huge concrete bridge spanning the dark foaming waters in the midst of a raging winter storm...

Every behavioural aspect of this mammoth structure, from its ability to carry the massive loads, to its ability across time to maintain a desired aesthetic expression, is governed by physical and chemical mechanisms acting on particles that are too small to see, even when using the most powerful microscopes in the world.

Linking these macroscopic properties to nanoscience is a formidable task and one that no individual organisation can carry out alone. A program including no less than



Investigations of nanoscopic elements of cement reaction products provides telltale clues on how large structures will behave and provide an opportunity to manipulate the material to the benefit of the end user.

10 Ph.D. and 5 post doctoral projects has therefore been initiated, under the Nanocem Marie Curie Training Network Programme.

AALBORG WHITE® Research and Development Centre participates in three of these projects, within topics spanning from aesthetics to mechanical properties. Project duration is four years. See the fact box for further information.



The NANOCEM network is a European industrial / academic partnership for fundamental research on cementitious materials. It consists of 30 members including some of the best university institutes and research establishments in Europe, as well as several European cement producers and other suppliers to the industry. More information on the partnership objectives and partners, is available at www.nanocem.org

New trend in Czech building architecture

At the turn of 20th and 21st century, new trends in the utilization of face concrete elements have developed in building architecture. One notable Czech producer, who has provided architects with a new direction in facades, is NOVABRIK CZECH, s.r.o.

This company produces a broad range of concrete facade sidings in the Czech Republic, produced under licence from the Canadian company Novabrick. To ensure product quality, including strength, colour constancy and voluminous exactness, Novabrick Czech, s.r.o. uses AALBORG WHITE® cement supplied by AVAS EXPORT-IMPORT spol. s r.o..

The main advantages of these products includes a wide range of applications across the entire facade skin and simple assembly without bonding cements being required. The pendant system gives buildings a 'ventilated skin' and good opportunities of achieving a perfect thermal barrier for the whole building.



Novabrick Czech's concrete elements are also used in garden architecture, for abutment walls, separation of ground waves and steps.

For more information about the producer and their products, go to: www.novabrick.cz



'Living the Brand' at many scales



'Living the Brand' can span from small white concrete hearts with cast-in magnets to stick on your fridge, to the circular white concrete office tables and up to the two large and impressive new white concrete filtrate water storage tanks.

The common understanding of values and behaviour behind the AALBORG WHITE® Brand and Communication Universe can and should be reflected in all situations in our every day life.

'Living the Brand' is therefore a holistic process which all employees in the AALBORG WHITE® Family can and must live out in every scale of activity.

Even in the physical sense, 'Living the Brand' can span from small white concrete hearts with cast-in magnets to stick on your fridge, to circular white concrete office tables and up to two large and impressive new white concrete filtrate water storage tanks.

Look at the world around you through a new pair of spectacles – everywhere there are opportunities for you to live Your brand!

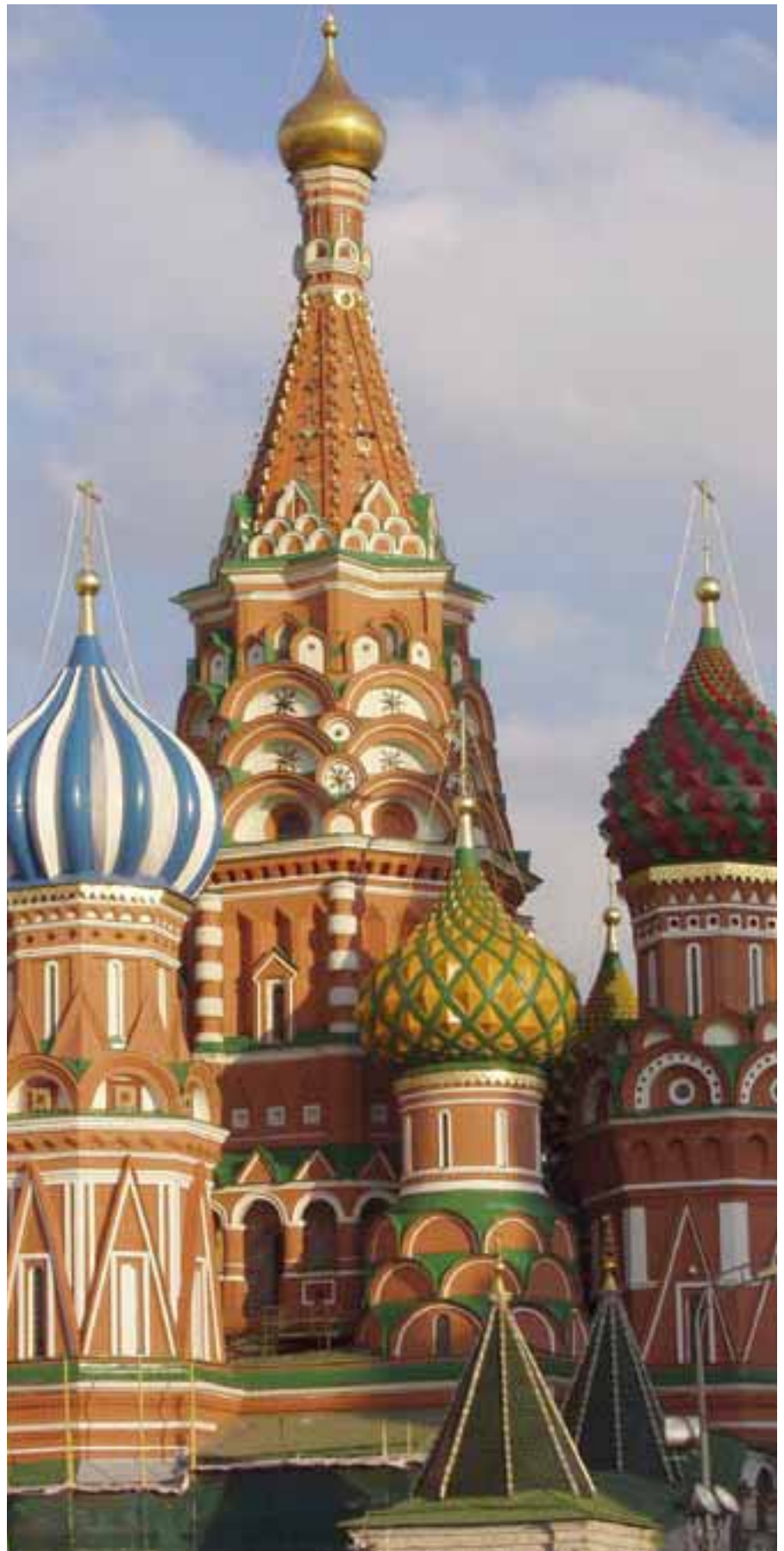
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Getting closer to the Russian market

The Russian market for white cement is growing strongly, primarily in cities such as Moscow and St Petersburg. To strengthen Aalborg Portland's position in the Russian market and to bring Aalborg Portland closer to our existing and new customers, a new Aalborg Portland sales office has been established in St Petersburg.

The St Petersburg company is called Aalborg White OOO. This location has been chosen to strengthen logistic services. The company is 70 % owned by Aalborg Portland A/S and 30 % by The Investment Fund for Central and Eastern Europe (IØ).

The company was officially founded on 29 August 2005.



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Announcement



*Erik Petersen,
Managing
Director of
Aalborg White
Asia Sdn. Bhd.*

On September 1st 2005, Erik Petersen took over the position of Managing Director of Aalborg White Asia Sdn. Bhd. Erik Petersen previously was Aalborg White Asia's Chief Financial Officer and before this Corporate Development Manager in Aalborg Portland A/S. He holds a Masters degree in Business and Economics.

We wish Erik all the best in his new job and look forward to ongoing good cooperation.