

# ERMCO NEWS

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## SUMMARY

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## In this issue

Welcome to the first ERMCO newsletter of 2011! In this issue we include a number of technical articles on different topics of great interest. You will find an article of practical interest for our industry, the use of automatic transmission for ready-mix trucks, and also information on such innovative aspects as new ways of controlling properties of concrete through nanotechnology.

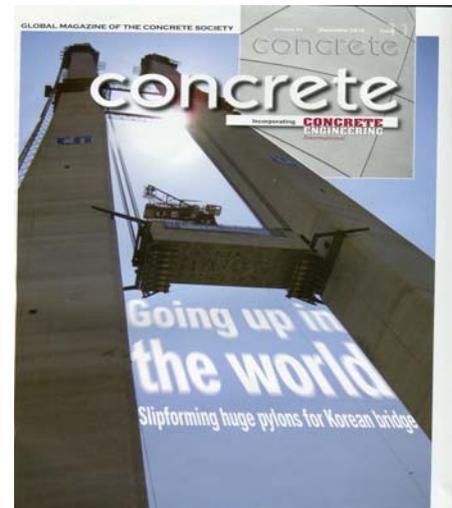
ERMCO Secretariat team ■

## Nanotechnology and concrete

Nanotechnology is the technology of using materials at the nanoscale (i.e at atomic or molecular scale). It is likely to have applications in the concrete industry and help us control concrete properties. Some admixture producers are already using materials at this scale. A paper presented from professor Surendra P. Sha at ACECON 2010, the Asian Conference on Ecstasy in Concrete held in Chennai (India) from 5 to 9 December 2010 describes three possible uses of nanotechnology in concrete - the use of nanoclays to reduce formwork pressure of SCC and in slipform paving, and the use of nanofibres for reinforcement. These applications may seem remote, but we can expect them to have implications in the future. Read more ([here](#))

## Automatic transmissions for readymix trucks

Operating ready-mixed concrete trucks efficiently in different circumstances - from motorways, to temporary accesses on crowded building sites, to urban roads subject to frequent traffic jams - is one of our industry's on-going concerns. Constant gear changing makes the driver's job more difficult, and is the source of endless problems for maintenance staff. The latest issue of *Concrete* magazine describes the more efficient use of fully automatic transmission. Read more ([here](#))



## Cement from thin air

Every now and then, popular science newspapers try to excite us with 'revolutionary' developments in concrete technology. Often these are something as commonplace as proposals to use flyash. But sometimes we get more interesting ideas. A recent one describes a process which mimics the way coral is produced to develop a new kind of cement - to mix sea water with CO<sub>2</sub> emissions from power plants. Possible? Read more ([here](#))

## Transparent concrete?

Visitors to last year's World Expo in Shanghai might have noticed that the outer walls of the Italian pavilion were kind of... unusual. Although they felt solid, and looked like concrete when viewed from an angle, light was able to pass through them. How was it possible? Read more ([here](#))

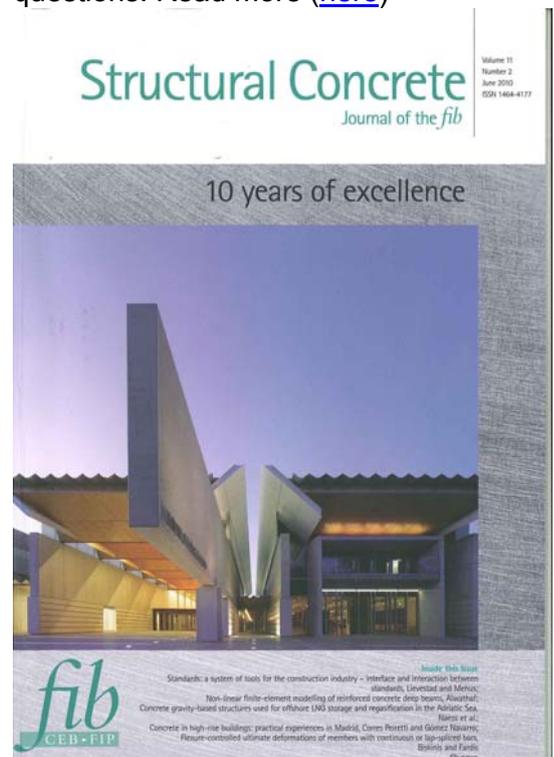


## CBV: from waste, fuel for cement plant

We all are aware of the impact of cement production on the environment and on the many efforts to reduce CO<sub>2</sub> emission by improving the production process. Since May 2010 Buzzi Unicem, the Italian branch of Buzzi-Dyckerhoff group, has been testing CBV (CarBon Verde, "green carbon"), a new fuel for cement plants obtained by specific treatment and micro grinding of mixed municipal waste. The process guarantees this material may be used to power cement plants. In an interview to the Italian financial newspaper "Il Sole 24 Ore" the company Honorary President Sandro Buzzi, highlights the many benefits of CBV. Plants using CBV may reduce the consumption of carbon coke by up to 20% replacing it with a minimum cost fuel. Tests performed so far have shown a lower level of emission compared to carbon coke, while the high temperature of cement kilns will avoid any risk of dioxin emissions and fine dust. A feasibility study of a 30-35.00 tons CBV production plant is underway. *Il Sole 24 Ore*. "Pronto il Carbon Verde di Buzzi" (in Italian)

## Standards in the construction industry

We are all familiar with standards, as we work with them every day. But how often do we step back to consider the general purpose of standards, and how they fit into a wider context? Two articles in *Structural Concrete*, the journal of the European concrete federation *fib* by colleagues from TC104 address these questions. Read more ([here](#))



## Meetings

### ERMCO Board

The third session of the 18<sup>th</sup> ERMCO Board Meeting will take place in Brussels on the 15<sup>th</sup> of March 2011.

### Conagg/Conexpo

The famous exhibition will take place in Las Vegas on the 22-26 March, 2011.