

Press release

CO₂ to Energy: Carbon Capture in Cement production and its Re-use

ECRA collaborates with the University of Mons

This 24th April 2013 ECRA (European Cement Research Academy) and University of Mons signed an important scientific agreement contributing to a contemporary issue which will affect the future of the cement industry.

ECRA serves as a platform on which the European cement industry supports, organizes and undertakes research activities, and understands itself as part of a network which comprises various research facilities such as universities, federal institutes and the research centres of cement companies or equipment suppliers.

UMONS, in the framework of its Research Institute for Energy, develops, on the other hand, since several years multidisciplinary and applied research activities related to carbon capture and storage, as well as more generally to absorption and adsorption techniques for the gas separation and purification in industrial applications.

Therefore ECRA and UMONS approached in order to conclude an agreement related to the creation of a privileged partnership and the development, within the University, of an academic Chair financed by ECRA.

The main objective of this academic Chair is to create a centre of scientific expertise in the specific field of “*carbon capture in cement production and its re-use*”, and promote research and innovation.

The signing of the agreement took place at Mons in presence of Daniel Gauthier (Chairman of the Technical Advisory Board – ECRA), Martin Schneider (Managing Director - ECRA), Calogero Conti (Rector of UMONS), Paul Lybaert (Dean of Faculty of Engineering - UMONS) and Marc Frere (President of Research Institute for Energy - UMONS).

The Chair will support research activities by financing fellowships for Postdoctoral researchers or PhD students, visiting Professors and Experts. Graduate students will also be associated to the scientific activities of the Chair in the framework of master's theses and internships.

The ECRA Chair associates professors and researchers from UMONS, who commits themselves to share their scientific expertise with ECRA, bringing his own know-how and providing funding for the activities of the Chair.

The agreement also includes awards, organization of events (seminars, workshops and conferences) and publications of results in the open scientific literature and scientific reports.

A Scientific Committee, with representatives from ECRA and UMONS, will manage the Chair activities through meetings organized at least twice a year to discuss the Chair project evolution.

The scientific framework of the Chair will contain studies relative to CO₂ capture processes applied to the cement industry, and the subsequent potential use of CO₂ as new fuels.

More specifically research focus could be given to:

- the oxygen production and subsequent comparison of different production technologies ;
- the flue gas treatment for CO₂ capture (especially de-NO_x and de-SO_x) which can be applied by absorption or by adsorption; this includes not only oxyfuel combustion, but also pilot studies and projects on post-combustion technologies ;
- the re-use of CO₂ which can be achieved by various processes which convert CO₂ into methanol or methane, taking advantage of renewable electrical energy.

This collaboration between ECRA and UMONS is certainly a big opportunity for interesting scientific developments.
