



Speech
by
the President of Iceland
Ólafur Ragnar Grímsson
at the Opening
of the Nordic Rheology, Concrete Research
and Eco-Crete Conferences

Reykjavík
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Distinguished scientists,
entrepreneurs, delegates,
Ladies and Gentlemen

It is indeed a great pleasure to welcome you all to this comprehensive, path-breaking gathering where the Nordic Rheology Conference, the Nordic Concrete Research Symposium and the first Eco-Crete Conference join hands in discussions and deliberations, covering topics ranging from the flow of milk to the carbon footprint of environmentally-friendly concrete.

I especially welcome those who have travelled from afar and thus honoured our country and our contribution to this important field of research and economic progress.

Iceland is, as you know, the youngest country on earth in geological terms, a territory where the Almighty has decided to continue the process of creation with frequent eruptions, the emergence of new islands and lava fields, continuous earthquakes and an enormous volume of volcanic ash, creating new deserts and disrupting airline traffic, both in Europe and other parts of the world.

In Iceland we have been privileged to witness two formidable production processes. The first of these consists of the emergence of new material from inside Mother Earth, rearranging the landscape, creating new colours and shapes. The second, more recent, has been the industrial

production of concrete as the foundation of modern Iceland and our highly advanced economic and social progress.

Concrete has been very important for the transformation of the Icelandic nation from being among the poorest in Europe one hundred years ago to achieving top positions in surveys of general prosperity and welfare. In modern times it has been almost the only domestic construction material, helping us to achieve progress despite the harsh climatic conditions.

It has, however, sometimes been a rough ride due, especially some decades ago, to serious problems with alkali-silica reactions which proved common in buildings all over the country. These led to intensive research on preventive measures and to the use of silica fume in cement, which has proved to be highly effective. Thus, we have had no cases of damages caused by alkali-silica reactions in the last couple of decades. I believe that no other country has solved this problem in such an effective and economical way, an achievement led by our experts, scientists, research institutions, and enlightened companies and citizens.

In addition, the chimney of the ferro-silicium plant in Hvalfjörður has, instead of adding to smoke pollution, saved us from the so-called 'alkali ghost'.

Recently the silica fume has again been playing an important role as a key ingredient, this time in environmentally-friendly concrete. It has been my privilege to follow this process up front through my good friend, Professor Ólafur Wallevik, both here in Iceland and in Abu Dhabi, where I observed a demonstration in which Icelandic silica fume played the lead role in making the most environmentally-friendly durable concrete. The carbon footprint of that concrete was less than one fourth of the local Abu Dhabi concrete footprint.

This unique development, based on cooperation between the Innovation Centre in Iceland and the company Readymix in Abu Dhabi, subsequently led to the establishment of China-Iceland Low Carbon Concrete Centre, the foundation of which was helped by a proposal I presented to the then Prime Minister of China, Wen Jiabao. Realizing that China produces more than half of all concrete in the world, the Chinese leadership saw that this new environmental dimension of concrete could become a crucial ally in the global battle against irreversible climate change.

In many ways, the Nordic countries have provided leadership in the evolution of concrete technology, becoming pioneers in development of high-strength concrete, ultra-high-performance concrete and now

environmentally-friendly concrete. Among these pioneers are, e.g., Hilleborg in fracture mechanics, Bache and Sellevold regarding silica fume and high strength, Nilsson in chloride permeability, Fagelund regarding frost resistance and Helland in standardisation; not forgetting the contribution of Professor Wallevik in rheology and self-compacting concrete and Finland's leadership in the precast concrete industry.

In the Nordic countries, we have always sought to build bridges between academia and industry, and it is in the spirit of that vision that I welcome you here today as I now declare the three conferences open.