The importance of combining design and materials – Learning from the past to design a better future

Gothenburg, September 20th, 2022

On October 11 one of the industry's leading researchers, Dr. Philippe Block, is invited as one of the speakers at Thomas Concrete Groups industry event about building a sustainable Gothenburg and the importance of concrete. To address the grand challenges posed by climate change, Dr Philippe Block and his research group's research focus on how historic structural design in combination with the right material can be reintroduced in modern day practice.

Dr Philippe Block is a Professor of Architecture & Structure at the Institute of Technology in Architecture, at ETH Zurich in Switzerland. Block and his research group started by addressing how historic, robust structures are built by simple humble materials and how to activate simple material in compression only, like concrete. Today, they are focusing on how these structural forms can be reintroduced in modern-day practice.

- It would mean less resources, less waste and building more efficiently so that we can rethink how projects are being delivered. We focus mainly on the potential of design - but we need to put the right material in the right place, where the forces naturally can and want to flow. All these skills and tools that started from first understanding historic structures, are exactly the right methods to reintroduce the right geometries for concrete, says Philippe Block.

- Our main focus is design and all of the benefits it has, but what's also exciting for us is the material concrete with all of the robustness-fire-thermal-availability-cost benefits. Material wise, concrete is getting better, and better and better.

To reduce the global warming potential of a building, the mass of its construction elements, how much material is needed, must be reduced as well as the impact of the material from a life cycle perspective, says Philippe Block.

- That needs to go hand in hand. And in that sense in a way, it's good for us to be innovating in concrete because we know that the concrete industry is committed to reduce the impact of their material.
- And when combining the two, designers pushing to reduce how much material we use, and that the concrete industry is really making their material by itself better, of course adds up.

"I'm convinced that concrete will be the most sustainable material"
When looking at the current situation in Europe and the transformation of the industry, Block senses that the industry is moving – but not fast enough.

- I experience that governments are starting to install regulations that limit the carbon emissions, for example. There is something moving, but if we're really on a proper track to net-zero and so on – I don't think so. It needs to start with how the project is described and this can be imposed by strongminded or committed clients, but of course more effectively when regulations require it.

- If people were to really start adopting this - that you both push on the material side but more importantly on the design and geometry side, then I'm convinced that concrete will be **the** most sustainable material. I don't think that's far away. We also know that concrete can deliver at a scale that is needed for the still remaining construction demand globally - and for these we don't really have alternatives, right? Philippe Block finishes.

For more information, kindly contact:
Karin Gäbel, Sustainability Manager, Thomas Concrete Group AB
+46 (0)10 450 5201 | karin.gabel@thomasconcretegroup.com

About Thomas Concrete Group AB
Thomas Concrete Group is a Swedish family-owned group that produces and distributes high-quality concrete products and services. The company was established in 1955 in Karlstad, Sweden, by Martin Thomas, and today has operations in the USA, Poland, Germany, Norway and Sweden. The head office is in Gothenburg, Sweden. The Group has around 2,120 employees, produces 5.6 million m^3 of concrete, and had a turnover of approximately SEK 7.8 billion in 2021. The subsidiary in the US is Thomas Concrete.
www.thomasconcretegroup.com

About climate-improved concrete
Climate-improved concrete is a concrete with a lower carbon footprint with the same high - sometimes even higher - quality, function and performance compared to a traditional concrete. www.klimatförbättradbetong.guide