

BRIEF DESCRIPTION

There are currently no methods to detect the structural integrity of cement in real-time. With smart cement, it is now possible to monitor various properties of cement structures in real time. These properties include contamination, corrosion, temperature, mechanical pressures and more. By gathering and delivering data on these properties, we enable our users to monitor the integrity of their cement through its operational life – ultimately preventing potentially catastrophic cement failures.

MISSION

We make materials “smarter” to make operations safer. With our technology, it is now possible to retrieve and analyze critical data on cement materials. This previously inaccessible data can be used to directly prevent such incidences as the 2010 BP oil spill. The environmental damage, financial upset, and fatal human consequence of this incident and others like it could have all been avoided with the right data. Our goal is to use this data ensure that unexpected cement failures are no longer a liability in any industry. From oil and gas to construction and public infrastructure, we intend to reach out wherever there is risk.

TECHNOLOGY AND SYSTEMS

Implementation of our technology starts by mixing our conductive additive into a cement slurry. This gives the cement a conductive property that creates electrical responses based on different conditions and irregularities in the cement (i.e. cracks/stress). Data from these electrical responses are transmitted to a monitoring interface; this is where the data will be used to directly prevent cement failure. This data reaches the interface through an internal wiring system rooted throughout the cement, a lot like veins in a nervous system. While this design can be adapted to most greenfield cement projects as is, we are currently working on a fully wireless method. Our goal is to eventually be applicable in all cement projects, greenfield and brownfield. It should be noted that we are also developing a smart coating that can be applied to existing cement structures. This will be a critical extension to our current technology.

BUSINESS STRATEGY

Our monitoring system can be implemented through either an internal additive or an external coating. These make up our two main products. While there will be prices associated to these products, our revenue model revolves around the data they gather. We will provide this data to customers in two ways – subscriptions (continuous data delivery) and inspections (one time data retrieval and analysis). We can best execute this model through a strategic partnership in insurance, where our data can be used to analyze operational risks that are currently unquantifiable.

MARKET

Cement is the most widely used material in the world. The global cement market is valued at more than \$300 billion today and is expected to reach \$418 billion by 2018. With just a small share of this market, SMD&R has the potential to become a billion dollar company. [insurance details]

MANAGEMENT

The founders are Dr. Burak Ozturk, Dr. Sinan Geylani, and Dr. Cumaraswamy Vipulanandan. Burak Ozturk is a leader for innovative global technology in offshore oil and gas – he holds a PhD and MSc in thermal fluid sciences from Texas A&M and has had an extensive career as a group technology manager at MCS Kenny. Sinan Geylani has a B.A.Sc. in civil engineering, M.A. in economics, and Ph.D. in organizational management. He is currently the chief underwriting officer at the casualty department for AIG Middle East. Sinan has extensive experience in construction/energy liability underwriting. Burak and Sinan are both finishing a Columbia/London Business School executive MBA program. Dr. Cumaraswamy Vipulanandan is the inventor of our technology, chairman and professor of civil and environmental engineering at the University of Houston, and director of the Center for Innovative Grouting Materials and Technology (CIGMAT).

FINANCIAL PLAN

(In Progress)



Company Profile:

Industry: Cement Employees: x
Founded: July 2015 NAICS Code:
541330 SIC Code: 8711
Engineering Services

Address: (tentative)

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Competitors:
OceanIt (research required)

Patent:
(finalizing)