

## **World's First Sustainable, Environmentally Friendly Green Concrete System**



**Jon Hyman - CEO**

### **About CeraTech Inc**

A Green cement and concrete company

Incorporated in 2002, CERATECH, Inc. is a clean, green cement technology company that has successfully developed and commercialized the world's first sustainable, environmentally friendly green concrete system.

CeraTech's core technology converts industrial waste by-products produced by coal-fired power generation plants into hydraulic cements that provide greater durability and construction benefits when compared to portland cement. When utilizing CERATECH<sup>TM</sup> Green Cements the complete manufacturing cycle of existing cements is displaced, and tremendous environmental benefits are realized through reduced CO<sub>2</sub> output, energy savings, preservation of virgin resources, reduced landfill requirements, profound water savings—all while providing a more durable, long life concrete.

CERATECH's carbon neutral cement is the most environmentally friendly cement available in the market today. Our green cement meets and/or exceeds the most stringent engineering requirements, is compatible with all existing batch, delivery, placing and finishing techniques, and provides exceptional durability for commercial, infrastructure and industrial applications. Marketed under the ekkomaxx<sup>TM</sup>, FIREROK<sup>TM</sup>, KEMROK<sup>TM</sup>, GreatWhite<sup>TM</sup>, and Pavemend<sup>TM</sup> brand names, CeraTech has engineered a full line of products for both new construction and repair projects which are available through a network of concrete distribution companies.

CERATECH also provides a wide range of technical support service including research and development, educational seminars, and design and installation consultation for owners, architects, engineers and contractors.

CeraTech, Inc. is a privately owned Delaware Corporation.

### **Mission Statement**

CeraTech's mission to develop and bring to the market, carbon neutral cements that deliver superior performance at a competitive price. Additionally, we strive to achieve profitable growth through superior customer service, innovation, quality and commitment.

### **Core Values**

Our values define the character of CERATECH. The values that guide our organization are:

#### **Sustainability**

We are committed to sustainable development that meets the needs of the present, without comprising the ability of future generations to meet their own needs by delivering sustainable construction material to the market that are carbon neutral, comprised principally of industrial by products (>90%) and are more durable than traditional materials.

#### **Innovation**

We thrive on creativity and ingenuity. We aggressively pursue ideas that will change the world by enhancing sustainable construction practices and materials.

#### **Leadership**

We strive to be the world leader in all we do particularly focused on the advancement of carbon neutral, "Planet Friendly" cement technologies.

#### **Integrity**

The foundation of our character! We act with honesty, responsibility and respect towards our customer, organizations with whom we interact, our partners and our co-workers.

#### **Attention to Detail**

Success is driven by passion for the smallest of details.

#### **Passion**

We put our hearts and minds into our work to produce green construction materials that will improve the world and benefit future generations.

Teamwork

Teamwork is at the core of all our relationships. We work with our customers, partners and each other to achieve our common goals.

**Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine**

**CEOCFO: *Mr. Hyman, what is green cement? What does CeraTech do and how?***

**Mr. Hyman:** CeraTech is clean tech company that has developed a sustainable, green cement system using fly ash and proprietary renewable chemicals to replace portland cement in the production of concrete.

**CEOCFO: *Have there been attempts to use something other than portland cement in the past?***

**Mr. Hyman:** From what I understand, there have been numerous attempts over the years to reduce the amount of portland cement in a cubic yard of concrete typically by replacing portland cement with inexpensive industrial waste streams called supplementary cementitious materials. These supplementary cementitious materials, which include fly ash, slag, and silica fume, usually comprise less than 50% of the total cementitious materials used to produce concrete. Our cement system is unique in that it is a one for one replacement for portland cement in the production of concrete. Our cement does not contain any portland cement.

**CEOCFO: *What is Flyash?***

**Mr. Hyman:** That is a good question! Fly ash is a waste stream produced from burning coal. It is the second largest waste stream generated in the country behind municipal solid waste. Approximately a third of the electricity produced in the U.S. comes from burning thermal coal. More than half of the fly ash produced annually (60M tons) is landfilled. CeraTech's technology takes this waste stream and repurposes it for beneficial use producing the only carbon neutral cement system in the world.

**“CeraTech has developed a transformative, sustainable, environmentally friendly cement technology that for many industry applications possesses superior performance characteristics to traditional material and has a much longer service life.” - Jon Hyman**

**CEOCFO: *What was the original thought process as to how Flyash could become concrete?***

**Mr. Hyman:** The use of fly ash as a cement for the production of concrete dates back to 1<sup>st</sup> century where the Romans combined a pozzolan (similar to fly ash) and calcium with water, stone and sand to produce concrete. Our technology plays off that ancient invention combining fly ash with proprietary chemicals to create a hydraulic cement.

**CEOCFO: *What were the challenges in creating the technology?***

**Mr. Hyman:** The technical challenges to successfully commercializing our technology were significant. We had to take an inherently variable manufactured product (fly ash) and produce a consistent concrete. We had to prove the technology as a viable alternative to portland cement to a conservative, mature industry and we had to be cost competitive with traditional materials. With great persistence and a little luck, we have overcome these seemingly insurmountable challenges and have successfully commercialized our cement technology.

**CEOCFO: *When did you turn the corner? When did it come together? What were the last steps or the first steps of commercialization where it is now viable?***

**Mr. Hyman:** I believe we turned the proverbial commercialization corner in late 2013 after we completed our 50<sup>th</sup> project. Our sales cycle that year compressed considerably from previous years and the sales velocity through our sales pipeline picked up significantly. Additionally in 2013, we began to achieve industry acceptance and, in some instances, outright support for our cement technology.

Distribution remains one of our challenges. Even given the distinct environmental and performance advantages of our material technology, many of the concrete producers are slow to adopt new solutions. Ideally, we would like to have an exclusive distribution partner in every major metropolitan area in the country that will offer our cement technology as a standard product offering.

**CEOCFO: *Is there an aha moment? When do people believe that it is real?***

**Mr. Hyman:** I wish there was an “aha” moment in the sales process. If there is one, I have not found it. I have yet to find anyone in the construction industry that will accept a nascent technology without a product demonstration and associated

product testing. Everybody in our industry subscribes to the Missouri adage: “Show me”. If the product passes the appropriate testing then the real sales process begins in earnest.

**CEOCFO: *How do they know that five years down the road it will not disintegrate? What is it about your concrete that lets them know that once it is there and it is down that it is going to sustain?***

**Mr. Hyman:** Results taken from industry standard material service life testing conducted by independent laboratories suggests that our material has a long service life roughly twice that of traditional concrete materials.

**CEOCFO: *How is this all accomplished? Do you have a plant? Are you working within a certain geographic range?***

**Mr. Hyman:** We procure the fly ash from local coal fired power generation plants. These power plants act as a cement kiln producing our “fly ash” cement from the coal combustion process. There are more than 500 coal fired power generation plants in the U.S. Fly ash is shipped via a bulk tanker to the designated storage location, which is in most instances resides with our distribution partner where it is combined with our proprietary chemical admixtures, and sand, stone and water to produce concrete.

Our material technology fits seamlessly into the current industry distribution model requiring no additional equipment or infrastructure to produce concrete.

**CEOCFO: *It would seem hard to resist!***

**Mr. Hyman:** We certainly believe it is however, as I noted earlier, the construction industry like many other industries, does not readily embrace new transformative technology such as ours. Perseverance and project success are the keys to industry adoption.

**CEOCFO: *Concrete is one of those industries that has a little bit of a negative reputation; a somewhat negative connotation. Is that a factor or is that really more of a myth?***

**Mr. Hyman:** That is a very interesting question. It is a very traditional industry. People are risk adverse. There is severe pressure on product pricing, a continual push to reduce price for most construction materials particularly concrete. As such, competition can be fierce and that is, what I believe drives the perception of the industry.

**CEOCFO: *You have a number of different products. What are some of the variations that you have available?***

**Mr. Hyman:** We have five cement types each given a unique brand; a marketing convention that is not a common practice in our industry. Each brand has a unique set of performance attributes suited for specific applications. These performance attributes provide our materials a competitive advantage to traditional materials both in cost and service life. For example, KEMROK™ possesses exceptional performance for caustic and corrosive chemical environments and does not require a protective coating be applied after placement to extend the material's service thereby dramatically compressing the construction timetable and reducing the installation cost.

**CEOCFO: *Are you able to work with environmental groups to get your story out?***

**Mr. Hyman:** Unfortunately, we have not spent as much time with those groups as perhaps we should have. We are actively involved with the US Green Building council and are participants in the Architect 2030 Challenge. We were the first non-portland cement manufacturer to produce an independently verified Environmental Product Declaration “EPD” for our cement. The EPD clearly states that the broad use of our cement as a replacement for portland cement in the production of concrete can eliminate millions of tons of CO<sub>2</sub> while simultaneously conserving millions of gallons of fresh water. Our technology story plays well with many of the environmental groups mandate to reduce the U.S.'s carbon footprint given that we have the only carbon neutral cement system in the world today. Portland cement manufacturers produce approximately 5% of all manmade CO<sub>2</sub> emissions. Every ton of traditional cement replaced with a ton of our cement eliminates roughly one of ton CO<sub>2</sub> from being released into the atmosphere. Additionally by repurposing the fly ash for beneficial use, we significantly reduce the landfill burden. Water conservation has become a major challenge for many states in this country. CeraTech is perfectly positioned to help the states address their critical water conversation requirements given that our cement technology requires half the water of traditional materials in the production of concrete. If we replaced just 10% of the portland cement used in the U.S. on an annual basis with our cement, we would save more than 44 million gallons of water or 352 million bottle of water.

**CEOCFO: *Why should people pay attention to CeraTech today?***

**Mr. Hyman:** CeraTech has developed a transformative, sustainable, environmentally friendly cement technology that for many industry applications possesses superior performance characteristics to traditional material and has a much longer service life.

**BIO:** Jon Hyman has over 25 years of executive management experience leading organizations from start-up to high growth, with specific skills in operations, sales, marketing, distribution, product development, and strategic planning. Jon joined CeraTech, Inc. in 2003. From 1999 to 2003, he was the CEO of Sport Holdings, Inc., a holding company comprised of companies that designed, manufactured, and supplied shoe components to the athletic shoe industry. In 2003, he directed an effort that leads to the successful sale of Sport Holdings to a New York investment bank. From 1996 to 1999, Mr. Hyman was the CEO of Softspikes, Inc., and the worldwide leader in removable golf cleats. Before joining Softspikes, he served as Vice President of Marketing & Sales for a Canadian football league franchise. From 1992-1994, Mr. Hyman worked for the Walt Disney Development Company, managing Disney's effort to build a new theme park in Virginia. He served 23 years as an officer in the United States Army, 12 on active duty and 11 in the reserves. Mr. Hyman received a B.S. in Engineering from the United States Military Academy and an M.A. in Business Administration from Columbia Southern University.

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