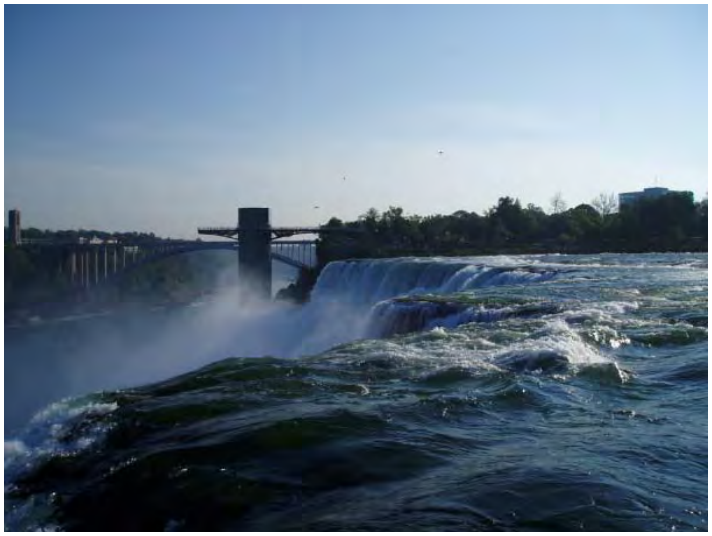
Pyrotek Graphitization Facility Expansion Project



P.I. Name - Michael Sekedat

PYROTEK, INCORPORATED

May 11, 2011

Project ID
#ARRAVT016

Expansion Project Overview

Timeline

- Start – March 2010
- Finish – January 2013
- 69% Complete as of Feb 2011

Budget

- Total project funding $22.6M
  - DOE share - $11.3M
  - Pyrotek share - $11.3M
  - Funding as of Mar 2011 - $15.7M
  - Funding budget thru Jun 2011 - $21M

Barriers

- Barriers and Risks
  - -- Winter season construction

Partners

- Pyrotek is a strategic partner with ConocoPhillips in the production of a high performance anode material, which is marketed and sold by ConocoPhillips as CPreme®*.
- Pyrotek is a key member of a USA lithium-ion battery supply chain, as our graphitization technology, coupled with ConocoPhillips' precursor material, has proven to provide superior anode properties.

* Trade name use authorized by ConocoPhillips.

Pyrotek

Expansion Project Overview

Pyrotek, Incorporated (“Pyrotek”) is a privately owned US based company that was founded in 1956, in Spokane, WA. Metaullics Systems, a Division of Pyrotek, utilizes proprietary furnaces within our Sanborn, NY plant to heat treat materials to extremely high temperatures (graphitization). Due to the high demand for electricity required by our graphitization process, the plant utilizes low cost, Niagara Falls hydro-power available through the New York State Power Authority.

The DOE Funding Opportunity, DE-FOA-0000026, has provided grants to support the construction of USA based manufacturers of batteries and electric drive components. The grant awarded to Pyrotek enables us to expedite the expansion of our production capacity, and bring a high performance anode material to the market in volumes that correspond with the demand from the automotive industry.

Pyrotek

Expansion Project Relevance

Pyrotek Project Objectives

1. Increase anode material production capacity at the Sanborn plant to meet higher projected EV, PHEV and HEV demands.

2. Decrease processing costs to ultimately provide a lower priced material to the lithium-ion battery manufacturers.

3. Meet the objectives of ARRA2009 by creating and preserving construction and manufacturing jobs within the United States.

Pyrotek

Expansion Project Approach (pg1)

Originally planned as a two-phased project, the DOE Award has enabled Pyrotek to initiate a single phased project to include:

- adding 93,000 sq feet of manufacturing space to our existing plant,
- installing and commissioning, (10) new high volume furnaces (with space for (8) additional furnaces when warranted by demand),
- installing and commissioning specialty material handling equipment,
- utilizing a hydro power allocation from the New York Power Authority, needed for the low cost processing, and
- hands-on training of new employees along side of our experienced graphitization department staff, to ensure a qualified staff is in place when the new equipment is brought online.

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Expansion Project Approach (pg2)

All NEPA work was completed, and our project was cleared to move forward.

Data collection, bar code system will track all material by lot numbers, keeping track of inventory and processing status. Material quality testing will be performed after completing each processing step to ensure the desired anode material properties are achieved and provided to the battery manufacturers.

The project period has been set to run from March 11, 2010 through January 31, 2013. Initial project plans and engineering started in October 2009. Ground was broken in July, 2010. Excellent progress has been made, even with the harsh winter conditions that hit the area. The project is expected to be completed during 2012, well before the three year project period ends.

Pyrotek

Project Accomplishments (pg1)

Milestone Title	Milestone Description	Planned Start Date	Planned End Date
Final Facility Design Complete	Facility drawings for RFQ process	10/1/2009	4/20/2010 completed
NEPA/FONSI Approved	All testing & research completed, & project management requirements established	11/10/2009	4/8/2010 completed
Site Groundbreaking	All site work - to include bldg demolition, grading, water retention, preliminary road work, foundations, etc	6/1/2010	7/15/2010 completed
Building & Concrete Complete	Steel structure erected & concrete pad completed	9/5/2010	5/1/2011
Initial Equipment Order – Installation	Install and setup of material handling equipment, as well as initial bank of 3 furnaces	5/10/2010	5/31/2011
Initial Equipment Commissioning	Starting, testing, calibrating of high technology equipment - to include initial test runs of material for certification	1/15/2011	6/15/2011
Project Complete	Facility through landscaping is completed, and all equipment (including 12 furnaces) are installed and commissioned	10/1/2009	6/30/2012

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Expansion Accomplishments (pg2)

The following pages provide a pictorial view of the project accomplishments through March, 2011.

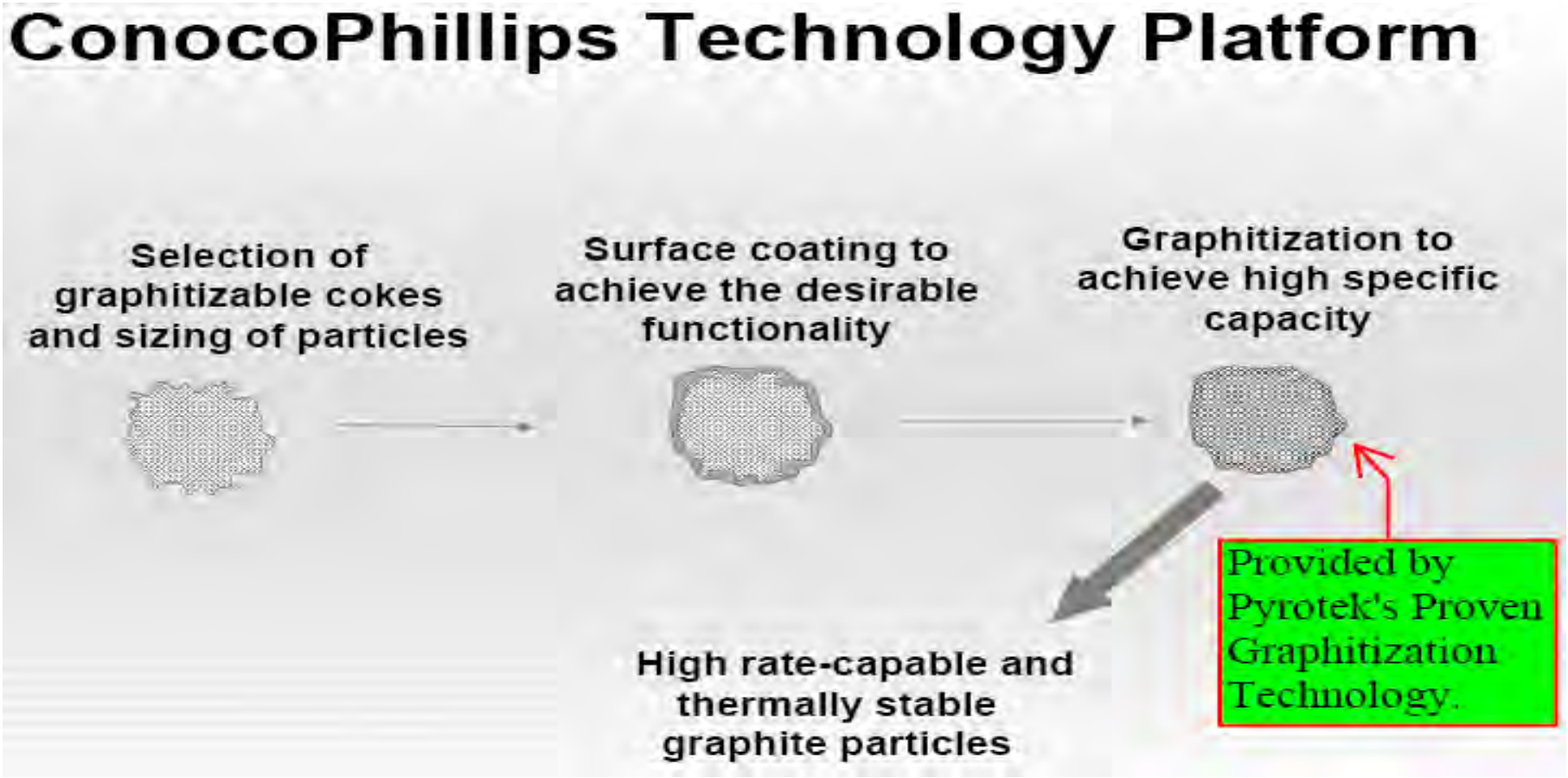
Pyrotek


TEREX


TEREX

Project Technology (pg1)

The anode material is presently being produced and has already been qualified as a high performance anode material for the lithium-ion battery market, and the domestic automotive industry.



Data provided by ConocoPhillips.

Pyrotek

Project Technology (pg2)

Technological advantages of CPreme®* include:

- a longer battery life due to a more stable anode material,
- a higher discharge rate, resulting in a smaller battery for HEVs, higher thermal stability for a safer battery, and
- the ability to develop ultra high power anodes for other challenging applications.

Data provided by ConocoPhillips.

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Project Technology (pg3)

Expanded CPreme® Product Line

Product	Application	Advantages
G Series	Power & Energy Automotive HEV, PHEV	Excellent 1st cycle eff., low heat release, high rate capacity, long life
A Series	Energy Automotive EV, PHEV	High capacity, excellent 1st cycle eff., low heat release, high anode density, long cycle life, good power capacity,
M Series	Power Automotive HEV	Excellent compatibility with Mn-spinel cathode, high rate capacity, low cost, long life
P Series	Power Automotive HEV	High rate capacity, good 1st cycle eff., low cost, good cycle life

Data provided by ConocoPhillips.

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Project Partnerships (pg1)

The anode material that Pyrotek processes belongs to our customer, ConocoPhillips, the leading domestic manufacturer of high performance anode materials for lithium-ion batteries. Their product, CPreme®*, has been adopted for use in power tool, defense, automotive and utility load management applications. It is based on patented technology and proprietary processing developed by ConocoPhillips, and has been shown to provide superior performance over the industry benchmark.

As stated earlier, one of the objectives of this project is to increase the production volume of this superior anode material through expanded facilities; however, increasing production is also tied to efforts to increase the throughput of each graphite furnace. Pyrotek and ConocoPhillips have worked closely over the past few years to develop processes that work to maximize our furnace throughput, while maintaining the superior material properties that make CPreme®* the leading anode material in the market.

* Trade name use authorized by ConocoPhillips.

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Project Partnerships (pg2)

ConocoPhillips continues to work with their strategic partners, including Pyrotek, to further improve CPreme®* and the manufacturing processes used to manufacture this superior anode material. A potential risk or by-product of changes to improve the quality of the product could be the addition of time to the production process. As noted, improved product quality may have an acceptable cost of a lengthier production process.

* Trade name use authorized by ConocoPhillips.

Project Future Plans (pg 1)

In response to forecasted demand for anode material that far exceeds the full capacity of our Sanborn plant expansion, Pyrotek plans on:

- adding more furnaces in the main plant, and in the storage area, bringing the total to (18) new furnaces within the expansion plant,

- initiating a 2nd expansion phase to add another 15,000 sf onto the end of the storage building to accommodate an additional (6) furnaces,

- initiating a 3rd expansion phase on (12) acres of adjacent land, and/or

- continuing discussions on expansion options with Tennessee and Washington where comparable low cost hydro power is available.

Pyrotek

Project Future Plans (pg 2)

Concurrently, the ConocoPhillips future plans for CPreme®* include:

- expanding the product line to target a wide spectrum of automotive Lithium-ion battery chemistry,
- scaling up production to meet demand and drive costs lower, and
- continuing to optimize processes and develop new products to lower costs further, while also growing Lithium-ion battery adaptation.

Data provided by ConocoPhillips.

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Pyrotek

Project Summary

The benefits of this project include:

- developing a global leadership position within the USA for providing high performance anode graphites for automotive and other demanding applications, since all R&D, production and marketing for CPreme®* is based in the USA.

- employment associated with the facility construction, equipment manufacturing, (48) production & administrative positions at Pyrotek, over (40) high quality positions at ConocoPhillips, and employment throughout the full domestic supply chain.

- Employment opportunities are expected to grow beyond Pyrotek, ConocoPhillips and the supply chain, as the business continues to scale up.

Data provided by ConocoPhillips.

* Trade name use authorized by ConocoPhillips.

Pyrotek

More Information on Pyrotek

Website: www.pyrotek-inc.com

Key anode material project personnel:

- Kevin Scott, Operations Mgr – Sanborn Plant

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- John Sage, SVP & GM Energy Group

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- Michael Sekedat, FM Energy Group

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Pyrotek

More Info on CPreme®* Anode

Contacts to get more information on CPreme®* anode graphites:

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Data provided by ConocoPhillips.

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Pyrotek