American Process Inc. Announces Chemical-Free Pulping Technology Enhanced with Nanocellulose for Lightweight Packaging Production

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American Process Inc. (Atlanta, GA), a leading biorefinery technology developer, announces launch of their patent-pending GreenBox++™ technology that replaces chemical pulping for production of high-strength, lightweight paper-based packaging using a chemical-free, water-based process powered by nanocellulose.

GreenBox++ technology is a 2nd generation enhancement of API's GreenBox+® technology. In June 2015, API announced commercial installation of the GreenBox+ technology at Cascades' Norampac-Cabano paper-based packaging facility in Quebec, Canada where a sodium carbonate-based chemical process was replaced with API's patented hot-water extraction process. With GreenBox+ technology, the facility reduces its environmental footprint and process energy costs.

According to Dr. Kim Nelson, API's VP of Nanocellulose Technology, "We have enhanced the performance and market potential of our GreenBox+ technology with addition of a bolt-on nanocellulose processing line. Utilizing nanocellulose produced on site from pulp made from our GreenBox+ process, the strength of paper-based materials used for packaging such as corrugated medium can be significantly increased. The strength-boost offered by nanocellulose makes GreenBox++ technology suitable for retrofitting both sodium carbonate and kraft pulping processes. This strength increase may also allow papermakers to lightweight packaging, or reduce the amount of material used."

According to Smithers Pira, a global market leader in packaging industry reports, reducing packaging material weights is an ongoing effort for suppliers, brand owners and retailers in support of cost reduction, reduction of environmental burden and progressing towards sustainability. Legislation is in place around the world to support this as well as significant pressure from consumers and retailers.

API's CEO Dr. Theodora Retsina remarks, "We are very excited about the sustainability profile of the GreenBox++ technology. By replacing traditional pulping chemicals with water and nanocellulose to produce high-strength paper-based packaging, existing mills can see improvements in energy use, efficiency, carbon footprint and competitiveness. Using conventional pulp and paper equipment, significant cost benefits can be realized by removing chemical costs and chemical recovery systems."

The GreenBox+ patent portfolio now includes U.S. Patent No. 9,347,176, to be issued by the U.S. Patent and Trademark Office on May 24, 2016; Canadian Patent No. 2,887,149, issued by the Canadian Intellectual Property Office on January 5, 2016; other patents pending globally; and proprietary know-how and trade secrets, according to Dr. Ryan O'Connor, API's CIPO. API has also filed several patent applications for onsite coproduction of pulp and nanocellulose for production of high-strength packaging.

The GreenBox++ technology with nanocellulose coproduction is currently being demonstrated at API's Thomaston Biorefinery in Thomaston Georgia, just south of Atlanta.

Kyle Fletcher, Executive Director Thomaston-Upson County Industrial Development remarks "We are thrilled that API continues to develop and demonstrate proprietary technology innovation in our city. With several distinct technologies being demonstrated at the biorefinery along with a world-class R&D center, API has established our city as a key player in the global biorefinery field."

About American Process, Inc.
www.americanprocess.com

Headquartered in Atlanta, Georgia, American Process, Inc. focuses on pioneering renewable materials, fuels and chemicals from biomass and develops proprietary technologies and strategic alliances in the field to be scaled industrially throughout the world.

For more information about the GreenBox++ technology and nanocellulose, please contact:

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