

News

Tire company makes the most of used tires

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Harvey Buhr points out the powder residue that where what remains after a solid tire that went through the process after the oil and gas were removed. Buhr, CEO of Hitec LLC, has brought his process of recycling tires into four different components to RDH Tire and Retread company, to make RDH Environmental. Photo by Jon C. Lakey, Salisbury Post.



RDH Tire and Recapping Co. near Cleveland has been operating their "off the highway" tires recapping business for several decades. One problem in this line of work is the waste that is produced from unusable tires and scraps. Recently RDH has joined with Hitec to form RDH Environmental that uses a process that extracts oil and gas and other products from the spent tires and material. Hitec LLC, CEO Harvey Buhr (center) answers question from Ron Slack, with the NCDENR Division of Air Quality (right), about the process of recycling tires during a tour of the facility. Photo by Jon C. Lakey, Salisbury Post.



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Hitec, LLC CEO Harvey Buhr explains the recycle process during a tour that was given of a new venture called RDH Environmental Services located in Cleveland. RDH Environmental takes old tires and recapping materials and through heating process extracts Fuel oil, gas, carbon and sometime steel (if steel was used in the tire). The company says that 1,000 pounds of tires can be processed into 51 gallons of fuel oil, 120 pounds of gas, 200 lbs of steel and 330 lbs of carbon. The process saves landfill space and the recovered material can be used elsewhere. Photo by Jon C. Lakey, Salisbury Post.



RDH Tire and Recapping Co. Vice-president Bradley Ragan, left, talks with Rowan County Manager Gary Page during a tour of a new venture called RDH Environmental Services located in Cleveland. RDH Environmental takes old tires and recapping materials and through heating process extracts Fuel oil, gas, carbon and sometime steel (if steel was used in the tire). Photo by Jon C. Lakey, Salisbury Post.



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By Karissa Minn

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A local tire company has partnered with an alternative energy company to recycle tires in an environmentally friendly way.

RDH Tire & Retread Co., located in Cleveland, and Missouri-based Hitec LLC created a joint venture in April 2008 called RDH Environmental.

RDH Tire retreads off the road (OTR) tires — a type of large tire used in heavy machinery and by the military. But those tires typically last only through two retreads before they are scrapped.

Hitec created a startup facility on the RDH Tire property in Cleveland to process those scrap tires into carbon, steel, fuel oil and gas — most of which it plans to sell.

Bradley Ragan, vice president and CEO of RDH Tire, said this recycling process is an extension of the retreading it already does.

“There’s a lot of tires that come to us that ... can’t be retreaded any more, so then they are scrapped,” Ragan said. “Currently, we haul these tires back to our customers, who then have to pay to get rid of them.”

Right now, the typical disposal method for OTR tires is to bury them onsite or in a landfill.

“We’re very excited about this,” Ragan said. “Burying these in ground needs to become a thing of the past.”

Hitec CEO Harvey Buhr said Thursday he is glad to be associated with RDH Tire.

“We think that together, we have the best choice of locations and sites — and people to work with,” Buhr said. “We’re happy to be operating here in Rowan County.”

During a tour Thursday morning, Buhr explained to local and state officials and other interested people how the pyrolysis process is used to recycle tires.

“My thought in designing this system was using the least amount of energy to get the most out of it,” Buhr said.

Rubber flakes from the outside of each tire are placed on a conveyor belt, where magnets remove any steel fragments.

The flakes, along with the tire base, are moved to a low-energy preheating oven before they are inserted into a processor.

The processor is highly insulated so that energy is not wasted, Hitec said. It heats the rubber until vaporized oil and gas begin to separate from the carbon and steel.

In connected cooling pipes, oil falls away from the gas into a gravity drain system. Gas also is collected through pipes.

After processing, the remaining carbon is shaved from the steel frame of the tire. Carbon can be used for manufacturing a number of products, including new tires, and high-carbon recovered steel is sought by steel manufacturing companies.

Liquid fuel oil can be used as a heating fuel or a diesel fuel additive. Buhr said the oil’s sulfur concentration is too high to use for diesel fuel now, but researchers are working to bring it down.

Gas also can be used as a heating fuel or for electrical generation. The processing operation is fueled by some of the extracted gas, and the rest will be burned off for now. Buhr said he hopes RDH Tire will use it for their boilers.

One military tire weighing 1,000 pounds will produce 330 pounds of carbon, 200 pounds of steel, 350 pounds of fuel oil and 120 pounds of gas. (A standard OTR tire contains proportionately less steel.) Buhr said the company is working to build partnerships with companies to buy some of these materials.

The small operation set up now will provide jobs for four or five people, Buhr said. If it expands to allow for the processing of more and bigger tires, that number could grow to 30 or 40.

“We think it’s a good fit, and all of the RDH people think it’s a good fit,” he said. “We’re looking for the support of local, county and state governments.”

Robert Van Geons, executive director RowanWorks, said the economic development agency will work with RDH Environmental to connect them with businesses and state and federal officials.

“This is what we like to see — an existing industry growing, expanding and diversifying,” Van Geons said. “We look forward to helping them in any way we can.”

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