Flat Tire? Keep Rolling With Ameritire

Exhibiting the ingenuity and diligence that characterize the American spirit of free enterprise, a small company is poised to revolutionize the automobile tire industry.

Amerityre Corp.

by James Perloff

Inventiveness, hard work, and perseverance have long characterized America's spirit of free enterprise. Charles Goodyear endured years of hardship — even a stint in debtors' prison — trying to find a process that would make rubber more useful for mankind. "The creature," he said, "imagines he is executing some plan of his own, while he is simply an instrument in the hands of his Maker for executing the divine purposes of beneficence to the race." Goodyear's labors finally bore fruit in 1839, when (according to some accounts), after boiling rubber with sulfur, he accidentally dropped some on a hot stove, and vulcanization was born. The process has not changed substantially since Goodyear patented it in 1844; by the time of his death 16 years later, vulcanized rubber had found hundreds of uses.

As the chief component of tires, rubber has more than half its use today in the automotive industry, which itself has nearly epitomized free enterprise. Henry Ford's innovation of the first moving assembly line, in 1913, changed manufacturing forever.

Today, the legacies of Charles Goodyear and Henry Ford are converging in Boulder City, Nevada, at a little-known company called Amerityre (http://www.amerityre.com). Here, a combination of inventing and streamlining may achieve one of the auto industry's most dramatic changes in decades: a superior tire, made from polyurethane, that could make rubber tires obsolete. Lee Iacocca, former president of Ford and CEO of Chrysler, calls it "the first big innovation in tire technology since the introduction of the steel-belted radial," and says it "will change the way tires are produced forever."

Amerityre was founded by Richard Steinke. No stranger to hardship or labor, he spent his childhood in an orphanage from age one. During high school, he worked jobs both after school and on weekends. Following military service, he worked his way through the University of Arizona, spent a year as a staffer for Senator Barry Goldwater, and then started his own construction business.

While building homes, Steinke first noticed polyurethane's dynamic properties. Inspired to explore its potential uses, he entered the chemical industry. During the 1980s, he developed and patented polyurethane wheelchair tires, shoe insoles, ski boots, and other products. In 1995, he founded the American Tire Corporation (now "Amerityre"). It utilizes a remarkable polyurethane foam to make tires for bicycles, wheelchairs, golf carts, and garden equipment. Completely airless, these tires literally cannot go flat, even if pierced by an electric drill or bullet.

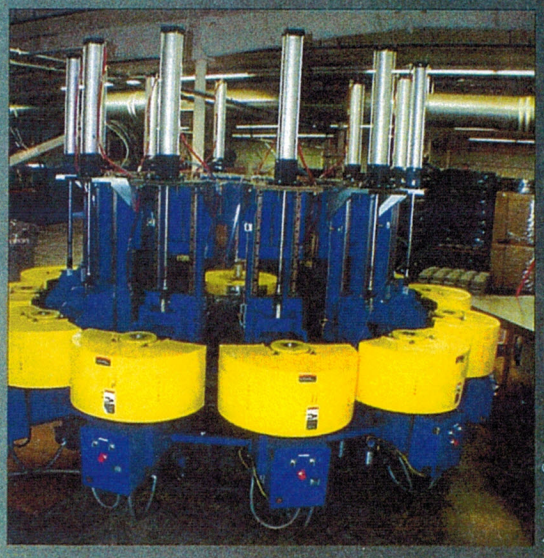
In 2000, a national controversy soared over fatal failures of tires on SUVs. The daughter of one of Steinke's friends died in such an accident. He then turned his attention to inventing a polyurethane automobile tire — a goal that other tire manufacturers had previously pursued without success. In 2003, Steinke and Manual Chacon, head of Amerityre's chemical development, developed a polyurethane polymer ideal for highway use.

One for the Road

Amerityre is the world's only company to have a polyurethane tire pass the U.S.

James Perloff is the author of The Shadows of Power: The Council on Foreign Relations and the American Decline *and* Tornado in a Junkyard: The Relentless Myth of Darwinism.

Ameritire founder Richard Steinke (right) **tests his polyurethane tires at the Las Vegas Motor Speedway. Ameritire is the world's only company to have polyurethane tires pass the U.S. government's tough "Federal Motor Vehicle Safety Standard 139."**



This tire-production carousel inside the Ameritire plant produces flat-free tires for Ameritire's non-automotive applications.

government's tough new standard for tires, Federal Motor Vehicle Safety Standard 139, which became effective in September 2007. Ameritire's tires perform similarly to rubber, in both dry and wet conditions. But what sets them apart?

• **Run-flat capacity:** The tires use air, but can drive without it for 200 miles at 50 mph, practically eliminating the need for spare tires.

• **Safety:** According to the National Highway Traffic Safety Administration, blowouts and tire failures contribute to about 400 deaths and 10,000 injuries in the U.S. annually. A major cause of tire failure is tread separation, which has forced recalls by major tire makers over recent years. Rubber tires are built in layers, thus sheared, frayed tire strips are a familiar sight along highways. But Ameritire's tires are molded from a single piece and thus are far less likely to separate or undergo blowout.

• **Mileage:** Ameritire's tires average around 45 percent less rolling resistance than rubber tires. Less power is therefore needed to drive them, translating to about 10 percent better gas mileage, welcome in days of three-dollar gallons.

• **Durability:** In most applications, polyurethane tires last 30 percent longer than rubber ones. This is because they run 30 percent cooler, suffer less abrasion, and, unlike rubber, are not subject to hardening and cracking, or deterioration from ultraviolet light.

• **Energy:** Producing one polyurethane tire requires only four percent of the energy used to make a rubber tire. With energy costs rising, significant savings can be passed on to consumers.

• **Balance:** The tires are perfectly round and uniform when manufactured, dramatically reducing the need for balancing, a maintenance task that runs motorists about $50 annually.

• **Environment:** Although the "eco" movement is politicized, worn-out rubber tires do pose a major disposal problem, and most states ban or restrict them at landfills. But polyurethane tires are 100 percent recyclable, and, unlike rubber, producing them creates no toxic emissions.

• **Appearance:** For the style-conscious, the tires can be made in any color.

Freedom of Assembly

These tires present benefits not only to consumers, but manufacturers. Bringing Henry Ford's assembly-line concept into the 21st century, Ameritire has designed a 14-station "race track," operated by people and robots. When completed, it will be able to produce one auto tire per minute, each tire then needing about eight minutes to "cure." Making a rubber tire takes close to an hour. Compared to rubber, manufacturing polyurethane tires requires:

• 1/5 the floor space;
• 1/3 the labor;
• 1/15 the scrap; and
• 1/4 the capital investment cost.

Also noteworthy are military implications. U.S. vehicles in Iraq are frequently attacked. No matter how well armored, their tires remain a vulnerable target, though the army has outfitted its Humvees with special rubber tires that can run flat for a few miles. Top Sunni politician Adnan al-Dulaimi, a leader of the General Council for the People of Iraq, narrowly escaped assassination when his car was ambushed after a flat tire disabled it. Halliburton workers even abandoned an $85,000 truck simply due to a flat.

Amerityre's polyurethane tires have significant potential for adaptation to these situations. They have proven run-flat capacity, are far less flammable than rubber, and provide sturdy handling in desert terrain. In 2007, Desert Research Technology (DRT), which provides tires for sand racing vehicles, signed a license agreement to build its treads from Amerityre's polyurethane technology. DRT President Bill Oliver reports: "Our collaboration with Amerityre allowed us to achieve all our goals." DRT deems Amerityre's polyurethane the ideal material for sand driving, and Iraqi sand is no different from ours.

Enterprise, Not Monopolize

Since Amerityre's tires surpass rubber in so many ways, why don't we see them on cars yet? Amerityre is small and virtually unknown to the public; furthermore, major tire manufacturers, while aware of Amerityre's progress, are subject to the same inertia we all tend to experience when faced with the prospect of significant change.

Innovators do not always win out in the marketplace. In the 1940s, automotive visionary Preston Tucker designed a car — the "Tucker Torpedo" — which, in its original conception, had many features that later became standard in autos, including seat belts, disc brakes, and fuel injection. But lack of financing and a highly questionable government investigation hamstrung his effort to produce the cars. Only 51 of the legendary Tuckers were built, 47 of which still survive.

Godly Charles Goodyear would probably smile to learn today that a new product is competing with his own. But Amerityre does not wish to supplant the big rubber tire makers — only to collaborate with them, showing them a cheaper, more efficient way to make a superior tire. With just 28 employees, Amerityre is too tiny to attempt global tire production. However, it is currently seeking a partner to help it build a pilot mass-production facility.

Amerityre founder Richard Steinke told THE NEW AMERICAN that "the great thing about America is, you can fail, and keep on trying. Nobody gets it right every time.... I'd rather be born poor in this country than middle class in any other, because the opportunities to succeed are unlimited."

Will Amerityre's unique tires go the way of Preston Tucker, or of Charles Goodyear? It will be the latter if a major corporation steps forward with the same entrepreneurial spirit. Lee Iacocca, probably the auto industry's best-known figure today, has a firm opinion. "Let's embrace this revolution together and welcome the new tire technology for the 21st century," he says. "Consumers are ready, and the tire industry needs to *get* ready."

Amerityre founder Richard Steinke remains optimistic, both about his company and his country, largely attributing his achievements to being born American. "In other countries," he told THE NEW AMERICAN, "they're afraid to innovate, because one failure can mean being blackballed or even suicide. The great thing about America is, you can fail, and keep on trying. Nobody gets it right every time. Look at Thomas Edison. I'd rather be born poor in this country than middle class in any other, because the opportunities to succeed are unlimited." ■

Amerityre's polyurethane is being adapted for use on sand-racing tires and can come in any color.

Newscom