

Alcoa touts step toward stronger aluminum for cars

December 5 2014, by David Koenig

(AP)—Alcoa Inc. is touting a breakthrough in aluminum manufacturing that it says will give the lightweight metal a better chance to replace steel in car doors and fenders.

Alcoa says the process, still in the testing phase, will create metal sheets that are stronger and more easily shaped into auto body parts than current [aluminum](#) and are lighter than high-strength steel.

Company executives say the aluminum-alloy material could show up in cars by 2018.

Alcoa said Thursday that it has conducted successful tests with automakers and has lined up one as a "strategic-development customer" for aluminum being produced at a pilot mill in San Antonio, Texas. Alcoa declined to name the other companies.

New York-based Alcoa has been shifting from mining and smelting aluminum to making products that can be shaped into parts for autos and airplanes. It has made inroads in auto-making, where the use of aluminum has been growing for years to produce cars that are lighter and get better mileage.

Now Alcoa is taking aim at steel used in doors and fenders. It got a boost when one of its customers, Ford Motor Co., decided to make the 2015 model of its F-150 pickup with a body that is 97 percent aluminum. That shaved up to 700 pounds from the 5,000-pound truck.

Steelmakers are also investing in technology to produce lighter steel.

Aluminum has been used extensively on some sporty but relatively low-sales cars such as the Tesla Model S. Some analysts believe that Ford's decision to clad the popular F-150 in aluminum threatens steel because it shows that lighter materials—and not just smaller vehicles, which some consumers don't like—can be used to meet tougher fuel-economy standards.

Alcoa CEO Klaus Kleinfeld said in an interview that automakers tell him they want lighter materials without sacrificing safety or steel's ability to be shaped into car designs.

"We knew there were some hills that aluminum had yet not climbed and that were occupied by steel because of the formability," Kleinfeld said. "We needed to reinvent a breakthrough production technology."

Conventionally, aluminum is poured into massive slabs that are reheated then rolled into sheets and coils. The process being used at the test facility in San Antonio skips the first step—aluminum is cast directly into sheets five millimeters thick, then rolled and coiled. Executives say it lets the company produce alloys that had been impossible to make before.

Kleinfeld said that Alcoa has 130 patents on the new technology but might eventually license it to bring in more revenue.

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Citation: Alcoa touts step toward stronger aluminum for cars (2014, December 5) retrieved 26 April 2024 from <https://phys.org/news/2014-12-alcoa-touts-stronger-aluminum-cars.html>

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