

R&D/Leverage seeks partner on container thread concept

R&D/Leverage
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By Jim Johnson
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R&D/Leverage makes it pretty clear, pretty quickly that the company is an engineering firm.

As such, the Lee's Summit, Mo.-based firm is looking for brand owners, bottle makers and caps and closure companies to help bring an internal thread concept to market.

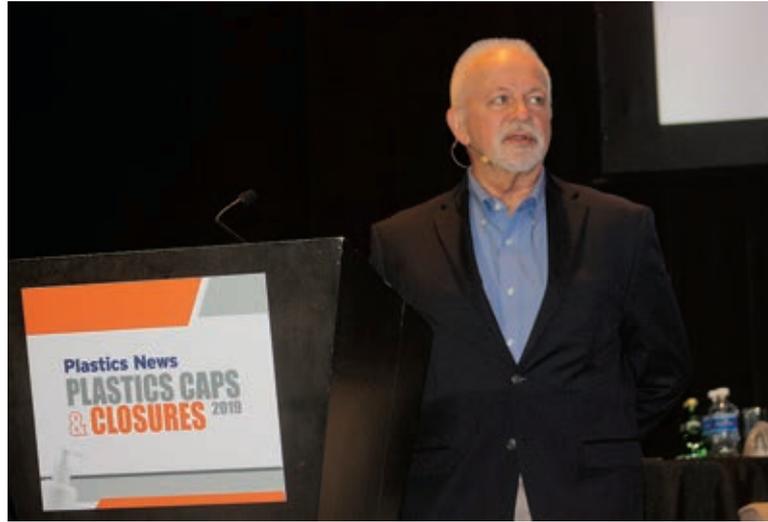
R&D/Leverage said it has patented an approach to forming and then removing containers from molds that have internal threads.

The idea, CEO Mike Stiles said, helps solve two problems: one for the consumer and one for the recycler.

Creating an internal thread approach allows containers to move toward a single resin — in this case, PET — to replace bottles that traditionally have used a combination of high density polyethylene with a polypropylene pour spout.

And creating a single resin container makes life easier on recyclers.

But the CEO said the container design also helps consumers avoid messes that can happen with measuring caps used on



R&D/Leverage CEO Mike Stiles said the thread problems concept solves two problems: one for the consumer and one for the recycler.

Plastics News photo by Jim Johnson

bottles with external threads.

The caps are great for pouring out exactly how much product is needed, but any liquid still in the cap can spill onto the bottle threads, down the side of the container and even beyond.

Using a dispensing cap that has external threads that nestle into the internal threads of the container allows the unused product to pour back into the bottle without spillage.

"We're very much an engineer-driven company. Obviously, sales driven, too. Engineering is what really put us on the

map," said Stiles.

So when some company employees came to the CEO with the idea of creating an internal threaded solution, Stiles saw the potential to help his customers bring new products to the market.

And he sees a new container that would not require the separation of different resins during recycling.

RD/Leverage spent plenty of time testing the unscrewing force needed to separate internal threaded containers from the mold because they just won't

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Mike Stiles
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pop out. And that's where the company's interest lies.

"We're not product designers," Stiles said. "The patent is on the mechanism that ejects the bottle from the machine."

"We're not a company that wants to restrict what our potential customers can do with their product design. There is some input that we need to put into that design to make sure it will work with the mechanism we use to eject. But it's strictly a tooling pattern, a mechanism to eject the bottle from the mold," the CEO explained.

One particular industry where Stiles sees promise is the fuel additive business, where long-neck bottles are used to add liquids to fuel tanks.

External threads on those containers, he said, can cause problems. Sliding the long-neck bottle into the fuel tank, the treads can

become caught on the internal metal flap near the gas cap.

That could lead to having to wrestle with the container during removal or the possibility of the metal flap shaving off a piece of the plastic thread that then travels down into the fuel tank, he said at the recent Plastics Caps & Closures 2019 conference in Chicago.

At the conference, organized by *Plastics News*, Stiles said his company is looking for partners to help bring the idea to commercialization.

"I'd be willing to talk with anybody. We're a tooling company. We're not a molder. We've got mold machines in our facility. We use them to validate the tooling, not to run production," he said.

Along with the Lee's Summit location in the United States, the company also has a facility in Nottinghamshire, England.