

“Twaron[®] allows us to improve our product performance enormously because it has the best strength-to-density ratio”

Jan-Jaap Koppert, CEO of LoW8

Twaron[®]

Twaron® firing on all cylinders

LoW8’s mission is to bring “aerospace technology down to Earth”, producing composite cylinders for the storage and transport of pressurized gas. By incorporating Teijin Aramid’s fibers into the product design, LoW8, a sister company of ALE Delft, is able to reduce the weight of their bottles by up to 70% compared to traditional steel ones. These composite cylinders have been praised for both their lower environmental impact and lower user costs.

From automotive to domestic market

“LoW8 initially produced low-weight LPG (Liquefied Petroleum Gas) bottles for containers in the automotive market,” says Jan-Jaap Koppert, CEO of LoW8. “However, a while ago, we decided to switch the LPG domestic market. Here, LPG bottles are largely used by people who use propane for cooking and heating. Thanks in part to our R&D center in Delft, we have managed to produce some of the best LPG bottles available, which make great use of the high-performance properties of Twaron® to reduce weight. In this way, our cylinders are able to deliver many financial and ecological benefits.”

Superior cylinder technology

“Traditionally, LPG cylinders were made from steel or glass-fiber-reinforced plastics,” explains Jan-Jaap. “However, the steel cylinders are very heavy and can be dangerous in case of fire, while the current glass-fiber cylinders are sensitive to impact damage and have a limited life span. Our composite cylinders



Key benefits of Twaron® for composites:

- > **Excellent strength-to-weight properties**
- > **Superior heat and chemical resistance**
- > **High fatigue and durability**
- > **Versatile and adjustable**
- > **Easy to integrate into production**

Twaron®

therefore clearly respond to a market necessity. They have a lower weight, making their transportation cheaper and more environmentally friendly. In addition, our cylinders do not dent, they have a much longer lifespan, and they have a 'Soft Grip' feature, which makes it easier for end users to handle the cylinder."

"Our cylinders have a lower weight, making their transportation cheaper and more environmentally friendly."

Best strength-to-density ratio

"Twaron® is a key component of our bottles," says Jan-Jaap. "It allows us to improve our product performance enormously. The reason why we selected Twaron® is quite straightforward: it has the best strength-to-density ratio. If you look at this parameter, Twaron® outperforms even carbon fibers. Besides, Twaron® fibers are very easy to process at high speeds, and they are less sensitive to contact and damage compared to other fibers. And, of course, we're very happy with Teijin Aramid. As a collaborative partner, they are always keen to think along with us."

New horizons

LoW8's composite cylinders are certainly impressive on a technological level, but how will they respond to the market trends ahead? "I'm very confident that our path ahead will continue to be bright," says Jan-Jaap. "As a company we're



keen on localizing our production wherever we can. That's why we set up a new production facility in Brazil with a starting capacity of 400,000 cylinders a year. We are also planning on releasing a special LoW8 cylinder, which is sure to change the LPG distribution landscape. Together with partners such as Teijin Aramid, I'm sure we can continue to meet our customers' demands, and that our technology will continue to fire on all cylinders!"

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