EVS-25 in Shenzhen

TM4 Seeks Partners

"These guys now need the technology, and fast," says Eric Azeroual, business development chief at Quebec drivetrain specialist TM4. That gives TM4 and other Western firms that want to pare their manufacturing costs in China new leverage as they bargain with potential local partners.

The Chinese "don't have time" to reverse-engineer Western products, Azeroual told *F&F*.

TM4 claims more than 100 patents for its efficient and power-dense permanent magnet brushless motors, as well as authoritative expertise in thermal management, coil-winding, inversed-rotor topology and inverter control algorithms. The company offers motors, controllers and integrated drivetrains with brandnames including Mogen, Neuro and Motive.

TM4 Motive brand drive with MO120 motor and CO60 inverter/controller

"Our goal is to set up manufacturing in China," Azeroual says.

"We're here to find a company that has access to customers and has access to manufacturing."

The key, he says, is to find a partner that's truly Chinese. "If you partner with a company that's not owned by the federal government, you're not partnering with a winner," he says, predicting that private firms developing an edge in China may well find themselves absorbed by government entities.

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We Want Your Batteries

The Shenzhen Tele Disused Battery Recycle Company is looking for discarded batteries of all types to recycle in Shaoguan, where lithium, cobalt and other materials are reclaimed. The firm has a receiving facility in Hong Kong.

Shenzhen Tele Disused Battery, buyer Susan Chang, +86-755-2788-5006; mobile +86-158-8964-9683; buy@telebattery.com.cn or zhangyuyimeng@yahoo.com.cn; skype fengye376; telebattery.com.cn

Shenzhen-based Green Wheel Electric Vehicle was among the firms employing traditional auto show promotional techniques, for vehicles including the lithium ion-powered Jimma, above, at EVS-25

Resolve for Intelligent Energy

Companies from the United Kingdom pooled their resources for a UK display at EVS-25. Almost all of them are participants in a new project, backed by £2.6 million (nearly $4.2 million U.S.) from the Technology Strategy Board, to design a battery-dominant, plug-in hybrid electric vehicle that will be ready to receive a zero-emission hydrogen drivetrain when fuel cells are economical — in 2017 or so, Revolve Technologies technical director Paul Turner told *F&F* in Shenzhen.

Revolve is handling driveline development for prime contractor Intelligent Energy, a hydrogen fuel cell specialist.

"We're sourcing all the major system supplies in the UK," Turner says, to help develop a "UK supply base."

The vehicle, aimed at postal and related delivery markets, will have a battery pack by Scotland's Axeon with Kokam lithium ion cells. The motor will be supplied by Woking-based Evo Electric. Project partner Carparo will supply an ergonomic driver cockpit and Lotus a lightweight aluminum chassis. Ricardo will supply a GPS drivetrain management system — the vehicle will be able to anticipate hills and adjust its balance of fuel and electricity to maximize efficiency, Turner says. The plug-in hybrid will have a 1.4-liter diesel engine from Ford and a comparable gasoline powerplant for the U.S. market.

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Odyssee and Pegasus from Belgium

Sietze Swolfs and Nicolas Dekeyser were among the enterprising student developers from Leuven, in Flemish Belgium, promoting the CQS Group T Racing Team's Odyssee lithium iron phosphate battery EV and Pegasus flex-fuel hybrid in Shenzhen.

Both competition cars are based on the classic Citroën 2CV from France but were built using biodegradable composite materials.

They employ switched reluctance motors, a technology which according to Swolfs avoids dependence on costly and supply-vulnerable rare earth magnetic materials.

Swolfs is team manager and Dekeyser heads up energy storage work.

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