

GLOBAL BUSINESS

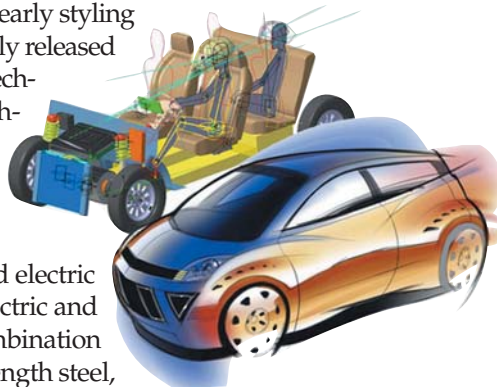


Future Steel Vehicle has four hybrid electric/fuel cell options

The Future Steel Vehicle Program has produced early styling sketches based on Phase I packaging studies recently released by WorldAutoSteel member companies. The FSV technical team, which includes EDAG, Quantum Technologies Inc., SFCV/Tongji, and WorldAutoSteel material experts, is considering four technical specification options for the proposed year 2015-2020 vehicle.

The four variants are electric and plug-in hybrid electric vehicles for 4+ passengers; and plug-in hybrid electric and fuel cell vehicles for five passengers. With the combination of alternative powertrains and advanced high-strength steel, all four types will achieve well below the emission requirements proposed around the world.

The resulting vehicle architecture will feature the latest portfolio of advanced high-strength steels from around the world, allowing engineers and designers to reduce the total mass of the vehicle without sacrificing safety or packaging requirements. These two issues become increasingly pertinent in future vehicle designs as engineers look to package new elements such as batteries, electric motors, and even hydrogen tanks into a vehicle that will most likely be driven in more dense traffic and urban environments. www.greensteel.org.



Joint venture to develop and market advanced fuel cells

General Automotive Company, a global provider of parts, accessories, and advanced technology for the automotive industry, announces a joint venture with SenCer Inc., Rochester, N.Y., to develop, commercialize, and market SenCer's UltraTemp ceramic composite materials for solid oxide fuel cells (SOFC). The joint venture will also advance the development of next-generation oxygen sensors.

SenCer has developed a series of next-generation ceramic-fiber/ceramic-matrix composite materials with a wide variety of applications, including fuel cell stacks for powering automotive engines. UltraTemp ceramic composite serves as a support system for conductive ceramic layers. The system is field-proven to bond multiple layers for long life at low cost, and at temperatures almost twice that of conventional fuel cells.

The company has also developed a system that can operate at temperatures much lower than traditional SOFCs, thereby providing even longer life. The SenCer technology reportedly solves the two most persistent problems in solid oxide fuel cell design — cost and durability — by replacing expensive platinum conductors with co-fired proprietary ceramic conductive layers. www.generalautomotive.com

Hot and cold-rolled steel imports decline

Preliminary data issued by the U.S. Department of Commerce showed an increase in overall steel imports of 7% in June compared with May, from 2.3 metric tons in May to 2.4 million metric tons in June, reports the Precision Metalforming Association. Total steel imports to date in 2008 are 11% lower than they were at this time in 2007. However, imports of hot-rolled steel declined by 7% from May levels to 225,691 metric tons in June. Cold-rolled imports also decreased in June, down 13% to 108,477 metric tons.

Combined imports of hot- and cold-rolled steel — key inputs for metalforming manufacturers — are down 9% compared to this point last year. The tight U.S. market for steel continues to present a serious challenge for industrial consumers even as the weak dollar and high overseas demand for steel further squeeze imports, says PMA. U.S. service center inventories are now at their lowest levels in ten years. www.pma.org

BRIEFS

The specialty chemicals group of **Altana AG**, Wesel, Germany, has signed an agreement to acquire the non-aluminum pigments business of **United States Bronze Powders Inc.**, Flemington, N.J. www.usbronzepowders.com

Air Products has acquired **Harvest Energy Technology Inc.**, a leader in the development of hydrogen generation technology for industrial and energy applications, to enhance its overall global hydrogen product offerings. www.airproducts.com

ArcelorMittal has signed an agreement to acquire the **Koppers Monessen Coke Plant** from Koppers Inc. for \$160 million. The plant produced 320,000 metric tons of metallurgical coke in 2007. www.arcelormittal.com

Applied Materials held a groundbreaking for an expansion project of its Tainan Manufacturing Center in China. This expansion will increase the company's ability to meet the demand for both its AKT flat panel display equipment and SunFab Thin Film Solar manufacturing equipment. www.appliedmaterials.com

ArcelorMittal plans to construct a new steel mill in Mexico. It will produce carbon steel and bars including rebar, merchant bar quality, and special bar quality products that will principally serve the construction and automotive sectors. www.arcelormittal.com

Castle Harlan Inc., the New York private equity investment firm, has completed the sale of **AmeriCast Technologies Inc.**, a manufacturer of large, complex steel castings, to **Bradken Ltd.**, an Australian manufacturer of cast steel and other products, primarily for the mining and railroad industries. www.castleharlan.com

Ceradyne Inc. has agreed to acquire **SemEquip Inc.**, a leader in the development of cluster ion implantation sub-systems and advanced ion source materials for the manufacture of logic and memory chips. www.ceradyne.com

China First Heavy Industries (CFHI) is investing \$336 million to upgrade its production capacity to satisfy domestic need as well as to vie for the foreign dominated home market. By 2010, CFHI is expected to produce about 60,000 to 70,000 tons of large castings and forgings, 500,000 tons of molten steel, and 240,000 to 250,000 tons of forgings annually. www.cfhi.com

Corning Inc. announces that, through a subsidiary, it has signed an agreement to acquire **Optimum Manufacturing Corp.**, a manufacturer of precision-machined components serving the aerospace and defense, scientific, medical, and communications industries. www.corning.com

Embraer announces plans for implementing two new industrial units dedicated to manufacturing complex airframe structures: one is focused on metallic assemblies and the other on composites, both located in the city of Évora, Portugal. www.embraer.com

The **Fabtech International & AWS Welding Show** including **Metalform** will partner with the **Association for Manufacturing Technology**, combining the efforts of several trade associations to produce an annual event with appeal to the full range of metal forming and fabricating industry professionals. www.sme.org

MetoKote Corp., a company focused on metal finishing processes such as electrocoat (e-coat), powder coat, and liquid paint, announces the opening of its newest facility in San Luis Potosí, SLP, Mexico. This is the eighth facility in Mexico for MetoKote, which has a total of 38 facilities across North America, South America, and Europe. www.metokote.com

Russian steelmaker **Novolipetsk Steel** reached a definitive agreement to acquire **John Maneely Co.**, the largest independent tubular-steel manufacturer in the United States, for \$3.53 billion. www.nlmksteel.com

Nucor Corp. plans to begin steel bar production at its previously idle rolling mill in Kingman, Arizona. Nucor expects capital improvements necessary to restart production to total about \$30 million, and expects rolling operations to begin in Kingman by the second quarter of 2009. www.nucor.com

Reactive NanoTechnologies Inc. (RNT), developer and manufacturer of its patented NanoFoil, has reached an agreement with **Ito Corp.**, Japan, to distribute RNT's NanoFoil products from their offices in Tokyo and Bangkok. www.rnifoil.com

ThyssenKrupp Services announces the launch of **ThyssenKrupp Aerospace**, the world's first global materials service provider. The new company incorporates ThyssenKrupp's existing aerospace distribution and supply chain management businesses with **Apollo Metals** and **Aviation Metals**, which it acquired earlier this year. www.thyssenkrupp.com

Japan's **Toray Industries**, **Mitsubishi Rayon**, and others will reportedly work together to develop a new carbon fiber material to replace steel in cars in an effort to lighten vehicles for better fuel efficiency. The program is being funded by the Japanese government with \$18.53 million over five years. www.toray.com

Carbon nanotubes reduce weight for military body armor

Carbon nanotube technology for the purpose of improving body armor is under development at Nanocomp Technologies Inc., Concord, N.H. The company has been working with the U.S. Army's Natick Soldier Center to develop the technology, and has been awarded a \$1.5 million development contract. Protective body armor is one of the major contributors to the weight a soldier must carry in combat. The Army is seeking to reduce the weight of body armor while improving its ability to protect from ballistic threats such as bullets and fragments from IEDs.

Nanocomp's carbon nanotubes are already distinguished by their very long lengths, up to one millimeter. As a result, its products are significantly stronger, more conductive, and safer when compared to short, powder-like nanotubes previously appearing in the market. In early 2008, Nanocomp Technologies began producing large area CNT sheets that not only demonstrate value for the Army, but also show promise for a number of aerospace and electronics applications. www.nanocomptech.com

AISI establishes steel market development strategy

The American Iron and Steel Institute (AISI) announces the AISI Steel Market Development Institute (SMDI) with the mission "to advance the competitive use of steel through a market-driven strategy that promotes cost-effective steel based solutions."

The new Institute, which will operate as a business unit of AISI, is being funded through a direct investment from eight of North America's leading steel producers with a strong commitment to growing steel's competitive position in the North American market.

The institute will be led by a board of directors with representation from each of the eight investing companies and will report to a CEO group. The current market committees will be re-named the Automotive Applications Council, Construction Market Council, and the Steel Packaging Council.

The eight companies participating are: United States Steel Corp., ArcelorMittal Dofasco, Nucor Corp., AK Steel Corp., SSAB North America Inc., Severstal North America Inc., ArcelorMittal USA, and USS-POSCO Industries. www.steel.org