

Contact: Japan: Koji Tani	Contact Europe: Daniela Karthaus
Hitachi Automotive Systems, Ltd.	Hitachi Europe Ltd.
+81-3-4232-5434	+44-1628 585 379
koji.tani.te@hitachi.com	Daniela.karthaus@hitachi-eu.com

### **Hitachi Completes Volume Production Line for Lithium Ion Batteries used in Hybrid Electric Vehicles**

Achieves world's highest level<sup>1</sup> of volume production capacity  
for automotive Li-ion batteries

**Tokyo, October 23, 2009** --- Hitachi, Ltd. (NYSE:HIT / TSE:6501) announced that Hitachi Vehicle Energy, Ltd. ("Hitachi Vehicle Energy"; Hitachi-naka City, Ibaraki Pref.; President: Hidetaka Kawamoto), a Hitachi Group company that develops and manufactures lithium-ion ("Li-ion") batteries for hybrid electric vehicles and other applications, has completed construction of a volume production line for 3rd-generation automotive Li-ion batteries. This line has the capacity to produce 300,000 cells per month, which in combination with an existing line (capacity: 40,000 cells/month) will enable Hitachi Vehicle Energy to supply a total of 340,000 cells per month. The output density of the cells produced is 3,000W/kg, which is about 15% higher than 2nd-generation cells. This represents the world's top-class level<sup>1</sup> of power density for Li-ion batteries that can be volume-produced. The line is scheduled to become fully operational starting from 2010.

The Hitachi Group built a volume production line for first-generation Li-ion batteries for use in electric vehicles and hybrid electric vehicles at Shin-Kobe Electric Machinery Co., Ltd. (President: Shigeru Ito), and began production in 2000. The Hitachi Group was the first in the world to develop and volume produce automotive Li-ion batteries. Later, three companies – Hitachi, Ltd., Shin-Kobe Electric Machinery, and Hitachi Maxell, Ltd. – jointly established Hitachi Vehicle Energy to specialize in the development and manufacture of automotive Li-ion batteries based on past experience with 1st-generation cells. The 2nd-generation volume production line went into operation in 2004. Currently, this second-generation volume production line produces mainly Li-ion batteries for commercial vehicles. In distribution, Hitachi Automotive Systems, Ltd. (President: Kunihiko Ohnuma) is engaged in sales of automotive Li-ion batteries.

<sup>1</sup> As of October 19, 2009. Refers to Li-ion batteries for hybrid electric vehicles. Source: Hitachi survey.

Based on the highly reliable, high-quality Li-ion battery production technologies cultivated through feedback from customers in the past, Hitachi Vehicle Energy has now completed a volume production line capable of producing 300,000 third-generation cells per month. In combination with an existing line, which has a capacity of 40,000 cells per month, Hitachi Vehicle Energy will be able to supply a total of 340,000 cells per month (the world's highest level of volume production capacity for automotive Li-ion batteries), and to respond to the demand for hybrid electric vehicles, which exceeds 100,000 units per year. Amid an increasing demand for environment-friendly vehicles, the company can meet requests for Li-ion batteries from automobile manufacturers around the world. Full-scale production is set to begin in 2010.

Hitachi Vehicle Energy brings together not only Hitachi's electronic control technologies and automotive battery technologies, but also the material and component technologies of the various companies in the Hitachi Group. It has an extensive track record of supplying products ranging from battery cells to battery system packs, and has shipped a total of roughly 800,000 cells<sup>2</sup>, mainly to automobile manufacturers and railway companies. In August of this year, Hitachi Vehicle Energy received the "Outstanding Achievement Award" in the Product and Technology Development Division of the 3rd Monozukuri Nihon Taisho Awards, presented by the Ministry of Economy, Trade and Industry in recognition of past activities in product development and new volume production technologies.

Hitachi and Hitachi Vehicle Energy will continue to combine the strengths of the Hitachi Group to contribute to the global environment through automotive Li-ion batteries, and to strengthen the Social Innovation Business.

The third-generation Li-ion batteries produced on the new line will be on display in the Hitachi Group's booth at the Tokyo Motor Show, which will be held at Makuhari Messe International Convention Complex (Chiba Prefecture) starting on October 23.

#### **Outline of Hitachi Vehicle Energy, Ltd.**

Company name:	Hitachi Vehicle Energy, Ltd.
President:	Idetaka Kawamoto
Capital:	75 billion yen (Hitachi, Ltd.: 65.3%; Shin-Kobe Electric Machinery Co., Ltd.: 24.7%; Hitachi Maxell, Ltd.: 10%)

---

<sup>2</sup> As of October 19, 2009.

Established: June 25, 2004  
Headquarters: 1410 Inada, Hitachi-naka City, Ibaraki Prefecture  
Outline of operations: Marketing, development, and manufacture of Li-ion batteries for hybrid electric vehicles and other applications  
Production capacity: Total: 340,000 cells/month (3rd-generation line: 300,000 cells/month; 2nd-generation line: 40,000 cells/month)

#### **Outline of Hitachi Automotive Systems, Ltd.**

Company name: Hitachi Automotive Systems, Ltd.  
President: Kunihiko Ohnuma  
Capital: 15 billion yen (Hitachi, Ltd.: 100%)  
Established: July 1, 2009  
Headquarters: Shin-Otemachi Building, 2-1, Otemachi 2-chome, Chiyoda-ku, Tokyo  
Outline of operations: Development, manufacture, sales and services of automotive components, transportation related components, industrial machines and systems, etc

#### **About Hitachi, Ltd.**

Hitachi, Ltd., (NYSE: HIT / TSE: 6501), headquartered in Tokyo, Japan, is a leading global electronics company with approximately 400,000 employees worldwide. Fiscal 2008 (ended March 31, 2009) consolidated revenues totaled 10,000 billion yen (\$102.0 billion). The company offers a wide range of systems, products and services in market sectors including information systems, electronic devices, power and industrial systems, consumer products, materials, logistics and financial services. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.



Li-ion battery cell assembly process



Li-ion battery assembly process