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Mitsubishi Electric Develops New Manufacturing Technologies for Lightweight, High-strength CFRP Materials

World-leading capacity will lead to smaller, lighter equipment

TOKYO, February 13, 2014 – [Mitsubishi Electric Corporation](#) (TOKYO: 6503) announced today that it has developed technologies for manufacturing carbon fiber reinforced plastic (CFRP) components in various shapes, as well as reducing their weight and improving their noise-reduction performance in commercial products. Mitsubishi Electric is applying the technologies in ultra high-speed elevators and industrial fans for delivery this year.

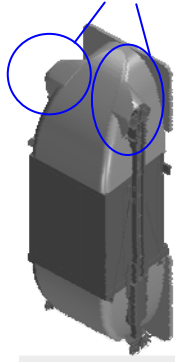
Mitsubishi Electric has been developing lightweight, high-strength CFRPs for space satellites. By combining such technologies for composite-material design and low-cost manufacturing, the company has reduced the weight of certain metallic components by more than 50% in the case of steel and more than 30% for aluminum alloys.

CFRPs for space satellites are manufactured from prepregs, or carbon fiber sheets impregnated with resin under high temperature and pressure. This process incurs the costs of manufacturing prepregs and molding equipment required to cure the prepregs. One of Mitsubishi Electric's new technologies is a low-cost manufacturing technology based on vacuum-assisted resin-transfer molding (VaRTM).

CFRP structures can be manufactured with various processes to improve functional performance. For example, thermal insulators can be sandwiched between CFRP to simplify installation, and CFRP shapes and thicknesses can be optimized.

By continuing to develop these technologies, Mitsubishi Electric expects to further strengthen its application of CFRPs in commercial products to help reduce energy consumption.

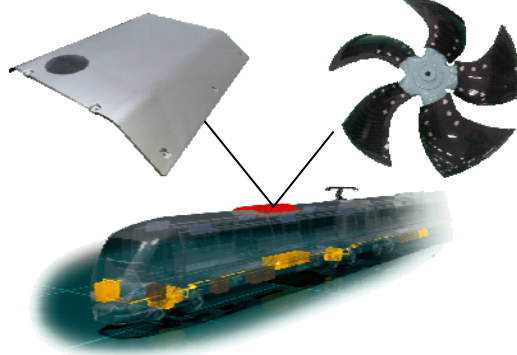
CFRP Guide Covers



Elevators

CFRP Covers

CFRP Fans



Air Conditioning Systems in Railway Cars

Patents

Pending patents for the technology announced in this news release number four in Japan and three abroad.

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About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 3,567.1 billion yen (US\$ 37.9 billion*) in the fiscal year ended March 31, 2013. For more information visit <http://www.MitsubishiElectric.com>

*At an exchange rate of 94 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2013