

## **QUICKSTEP PROCESS DELIVERS KEY BENEFITS IN 'NANOTECHNOLOGY' COMPOSITE PRODUCTION**

***SIGNIFICANT POTENTIAL FOR AEROSPACE AND AUTOMOTIVE CABIN COMPONENT MANUFACTURE***

- **New research from VCAMM shows the Quickstep patented manufacturing process can result in significant improvements in the structure of 'nanocomposite' materials, leading to enhanced performance characteristics.**
- **Exciting implications for the Quickstep Process to manufacture fire retardant nanocomposite materials for interior parts in aerospace, automotive and mass transit applications.**

International advanced composites group Quickstep Holdings Limited (ASX: QHL – “Quickstep”) has received a further boost to its patented composites manufacturing technology, today announcing that new research from the Victorian Centre for Advanced Materials Manufacture (“VCAMM”) in Australia has demonstrated that the Quickstep Process can lead to significant improvements in the structure of ‘nanocomposite’ materials.

Nanocomposite production is part of the broader field of ‘nanotechnology’, which is currently attracting major attention in the global scientific community. It involves the introduction of tiny ‘nano sized’ particles into the host composite material, which can serve to significantly change and improve the overall properties of the resulting product. Nanocomposites have specific application in the production of fire retardant composite materials, widely used in aerospace and automotive interiors.

The research was conducted by VCAMM in conjunction with the Australian Nuclear Science & Technology Organisation (ANSTO), which has independently verified all research conducted to date. The project was selected by ANSTO to be completed under the organisation’s prestigious research scholarship programme.

Dr Bronwyn Fox, who heads the team of composites researchers at VCAMM, said Quickstep’s manufacturing technique resulted in a more even separation of the nano sized particles throughout the composite material, significantly enhancing their overall effect.

“Our research has focused on comparing the structure of clay platelet particles in epoxy thermoset materials manufactured using different processing techniques,” she said. “Preliminary results indicate that the mechanical vibrations used in the Quickstep Process assist in separation, ensuring the platelets are evenly separated throughout the composite material. Faster heating also allows the polymer to get in between the clay platelets to further improve separation.”

“Improved particle separation enhances the overall quality of the nanocomposite product,” Dr Fox continued. “When examining fire retardation properties, our research shows that using the Quickstep Process should lead to significant improvements in performance characteristics.”

Quickstep’s Managing Director, Mr Nick Noble, said the research had exciting implications for the Company’s core strategy of securing manufacturing contracts and joint ventures with aerospace and automotive OEMs and their Tier One suppliers.

“Nanocomposite production is a massive growth area in the global composites industry,” he said. “If VCAMM’s research does conclusively prove that the Quickstep Process can offer key enhancements to the characteristics of nanocomposite materials, this would be a major new drawcard in attracting aerospace and automotive manufacturers to the technology.”

Dr Fox commented that the research may revolutionise the nanocomposites industry: “Quickstep has already demonstrated its ability to manufacture cheap nanocomposite materials at a faster rate than other processing

techniques. If we can also prove that Quickstep delivers higher-quality nanocomposite products, I believe it would open up a major new market opportunity.”

-ENDS-

**Released by:**  
**Nicholas Read/ Kate Bell**  
**Read Corporate**  
**Telephone: (+61-8) 9388 1474**

**On behalf of:**  
**Mr Nick Noble**  
**Managing Director**  
**Quickstep Holdings Ltd**  
**Telephone: (+61-8) 9432 3200**  
**www.quickstep.com.au**

**Dr Bronwyn Fox**  
**Senior Lecturer**  
**Deakin University**  
**Telephone: (+61-0) 417 392 235**

### **Background on Quickstep Holdings Limited - [www.quickstep.com.au](http://www.quickstep.com.au)**

Western Australian-based **Quickstep Holdings Limited** (ASX Code: **QHL**) is an advanced materials company which owns a scalable platform for the energy efficient manufacture of performance efficient composite materials.

Listed on the Australian Stock Exchange in 2005 following a successful IPO, Quickstep initially raised A\$6 million to underpin the worldwide commercialisation of its innovative and proven technology with application in the multi-billion dollar aerospace, automotive, mass transit and renewable energy sectors.

Composites combine high strength with light weight and are key materials in aerospace, automotive, marine, defence, public transport and industrial applications. The global composites parts market is growing strongly, reflecting a shift towards the greater use of composites as an increasingly desirable replacement for metals in many applications because of their high strength and reduced weight.

Quickstep’s proprietary process is based around a fluid-based curing technology that significantly reduces the cost and time involved in the production of composites compared with conventional processes. Quickstep has been at the leading edge of the growing need to reduce part costs since the early 1990s, with a significant investment in the development of the Quickstep Process over the past decade.

Quickstep already has automated Quickstep pilot production facilities operating at five separate locations with, aside from its own plant in Fremantle, West Australia; one in Japan; a third at the Victorian Centre for Advanced Materials Manufacturing (VCAMM) in Geelong; a fourth at the Northern Aerospace Technology Exploitation Centre (NATEC) in Manchester, England in conjunction with the University of Manchester; and a fifth recently established in the US at Dayton, Ohio, the birthplace of the aviation industry. A sixth machine is currently being commissioned in Germany at the European Aeronautic Defence & Space Company (EADS) group facilities in Ottobrun to support a Cooperation & Development Agreement with Eurocopter, the world’s largest helicopter manufacturer, signed in May 2007.

Global alliances are also in place with major international advanced materials suppliers such as Toray Composites (in the USA and Japan) and German-based industrial chemicals and performance materials giant Degussa AG, alongside R&D and Applications Development Agreements with groups such as VCAMM and the Australian National University (ANU).

Quickstep’s business model is a mix of equipment and license sales to major aerospace, automotive and marine manufacturers; joint venture arrangements, co-branding and co-marketing agreements with leading composites manufacturers, Original Equipment Manufacturers (OEMs), Tier One suppliers and alliance partners; and contract and in-house manufacturing operations and sales utilizing the Quickstep Process.

### **Background on VCAMM**

The Victorian Centre for Advanced Materials Manufacturing (VCAMM) represents a new model of research collaboration between the manufacturing sector and materials researchers in Victoria. It is based on the philosophy that innovation in the field of new and advanced materials requires advanced technology infrastructure and an integrated systems approach that addresses materials characterisation, manufacturing, design and deployment of knowledge across the value chain. In conjunction with this, VCAMM acts as a ‘one-stop-shop’ interface to allow industry to maximise the potential that the research community offers.

VCAMM is based around the core skills of three research organisations: Deakin University, Monash University and CSIRO Manufacturing and Infrastructure Technology, who are leaders in industry-focussed research, education and technology transfer for advanced metals, fibres and composite materials.

At the same time VCAMM draws upon the specific skills of other members in surface science, advanced computing and casting and alloy development. The centre has broad industry support and will enhance a number of current partnerships while also developing new collaborations. This partnership between researchers and industry will allow industry to increase its rate of innovation and technology uptake and thereby improve the sustainability of one of the State's most important sectors.

The centre operates on a project basis, including specific collaborative projects with partners and industry and internal strategic projects that develops concepts to demonstration stage.

**-ENDS-**