



ASX/MEDIA RELEASE

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VORTEX JOINT VENTURE WITH QUICKSTEP FOR HIGH-END COMPOSITE PIPES

- **Vortex and Quickstep announce QuickPipes Joint Venture to develop a new range of high-end composite pressure pipes featuring improved strength and corrosion resistance.**
- **Potential for the QuickPipes manufacturing process to lead to substantial cost savings in shipping of pipes, due to portability of manufacturing equipment and ability to manufacture and meld pipes on-site.**
- **Joint Venture will leverage from Quickstep's expertise in composite manufacturing innovation, and Vortex's significant piping industry knowledge and contacts.**

Australian-based integrated piping solutions provider Vortex Pipes Ltd (**ASX: VTX**) and international advanced composites group Quickstep Holdings Ltd (**ASX: QHL**) have joined forces to develop and market a new generation of high-strength, corrosion resistant pipes to be manufactured using Quickstep's patented composites manufacturing process.

The two companies have finalised a Joint Venture agreement, bringing together their respective strengths in composite manufacturing technology and pipe-lining and manufacturing solutions to deliver a 'next generation' product that offers significant competitive advantages to infrastructure groups and asset managers over existing alternatives.

The Joint Venture project, which will operate under the name "QuickPipes", will commence work immediately focused on the development of a range of high-end composite pressure pipes suitable for a broad range of applications in the infrastructure, mining and the oil and gas sectors.

The Joint Venture will initially be established on a 80:20 (Vortex:Quickstep) basis, with Quickstep contributing its technology and know-how, as well as a suitable Quickstep QS20 composites production machine. Vortex (previously known as 'ShieldLiner') will contribute its composites pipe-lining and manufacturing technology, industry contacts and know-how in the specialised fields of pipe cleaning, pipe rehabilitation and fibreglass pipe provisioning. Vortex will be responsible for stage 1 funding of the Joint Venture. Vortex is in discussions with VCAMM Ltd regarding research funding opportunities through their associations with CRC's (Co-operative Research Centres) and other government backed organisations.

It is anticipated that pipeline manufacturing using Quickstep's patented fluid-based technology would lead to a range of significant benefits, including improved strength and corrosion resistance in the pipes, as well as reduced manufacturing costs through faster processing times.

In addition, due to the portability of Quickstep's manufacturing equipment, QuickPipes would provide customers with the ability to manufacture and "meld" sections of pipe on-site, rather than having to ship the finished product from the manufacturer, leading to a substantial reduction in the logistics costs currently incurred. The potential ability to "meld" joints on-site is also seen as a significant benefit in providing a fully sealed pressure pipe solution.

Initial Proof of Concept ("POC") carbon fibre pipes have already been produced by VCAMM (Quickstep's joint venture partner at Deakin University) in conjunction with Vortex and show exceptional strength-to-weight ratios when compared to current market offerings and traditional steel and concrete reinforced pipes. These POC pipes were exhibited at the JEC Show, the world's largest composites conference in Paris, attracting significant interest from the international composites industry.

Vortex managing director Trevor Gosatti said the application of advanced composite technology in pipe manufacturing was becoming increasingly prevalent, as infrastructure asset owners recognised the improved 'whole-of-life' cost of these products.

"Vortex is receiving increasing enquiries from customers interested in alternatives to traditional steel pipe, who face large cost increases due to the increasing raw material costs," Mr Gosatti said.

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“While the industry is currently dominated by steel pipes due to their historical manufacturing base, we are seeing an increasing move towards composite pipe products due to their improving cost viability, reduced maintenance costs and longer lifespan. I believe the development of a new generation of advanced composite pipe cured using the Quickstep Process could see the beginning of an industry shift towards advanced composites particularly in specialist large diameter steel pipe replacement,” he continued.

Mr Gosatti also said the portability of Quickstep’s manufacturing equipment would be a significant benefit for QuickPipes.

“At the moment, customers are shipping fully completed pipes which are large and require a considerable amount of space when being transported – most of which is just vacant space within the pipe,” Mr Gosatti commented. “Because Quickstep’s machines are portable, we can simply ship Quickstep’s manufacturing equipment closer to the site and manufacture the pipes when and where they are required. That would save customers a substantial amount in logistics and transportation costs, further enhancing the attractiveness of QuickPipes products.”

For Quickstep, the Joint Venture represents an opportunity to leverage its composites manufacturing technology in a substantial growth market in the multi-billion dollar pipes infrastructure sector, without compromising its continued focus on securing major long-term manufacturing contracts and Joint Ventures in its priority target market, the aerospace sector.

Quickstep’s Managing Director, Mr Nick Noble, said the QuickPipes Joint Venture had the potential to open up a significant new global market for the application of Quickstep’s manufacturing technology.

“Working together with Vortex, our aim is to develop a very strong and light advanced composite pipe such as a carbon fibre pipe, that would be easier to lay and longer lasting than existing products,” Mr Noble said. “I believe the Quickstep Process can deliver significant benefits in pipe manufacturing, which could lead to an important new customer base for Quickstep.”

“The Quickstep Process has the potential to bring about a step-change in the manufacture of high-pressure pipes, offering an alternative to traditional materials such as steel and steel reinforced concrete, which have experienced significant cost increases and availability issues in the current booming world economic environment.”

The first stage of the Joint Venture will explore the use of the Quickstep Process to cure various pipes using a range of fibres and resins. The proving of the improved pipe properties expected using this process will allow detailed market research on the large potential for this product worldwide. This will be followed by the construction of the first QuickPipes manufacturing plant. The expected investment for Stage 1 of the project is a value of up to \$750,000.

It is expected that QuickPipes could produce early cash flow for the Joint Venture by the end of 2008/09 through the development and production of niche fittings for existing markets, and could produce commercial-ready lengths of finished pipe by the last quarter of 2009.

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Background on Vortex Pipes Ltd – www.vortexpipes.com

Vortex Pipes Limited (ASX Code: **VTX**) listed on the ASX in August 2004 as ShieldLiner Limited, a company focused on the development of its proprietary ShieldLiner[®] System, a trenchless technology for the in-situ repair and rehabilitation of pipes.

The Company has continued to develop the ShieldLiner[®] System and in doing so recognised an opportunity to establish an integrated pipe services business providing a range of trenchless and composite technology solutions.

Vortex, through acquisitions, is evolving into an integrated pipe services and supply company with three distinct business units:

- Vortex Rehabilitation;
- Vortex Cleaning; and
- Vortex Composite Pipes.

Vortex Rehabilitation Business Unit

Vortex's subsidiary (Premium Pipe Services) is the Australian and New Zealand distributor and installer of the Saertex cured in place liner system. This system uses ultra violet light technology to cure a pre-impregnated fibreglass and resin liner. It offers many environmental, space utilisation and time advantages over other methods as well as providing a premium product. The Saertex system is an excellent pipe rehabilitation solution for gravity sewer, stormwater and non pressure pipe primarily in smaller diameter pipes.

The ShieldLiner[®] System is a unique multi layered pipe lining technology developed and owned by Vortex, that has the potential for lining, repairing and sealing pipelines in situ to prevent leakage, improve structural integrity and decrease flow friction. The ShieldLiner[®] System is being developed primarily for rehabilitation of larger diameter pipes high pressure and potable water pipes.

As part of Vortex's pipe rehabilitation solution the Company has recently completed several pipe bursting jobs and is looking to expand its use of this technology, in particular in Western Australia.

ShieldLiner in more detail

ShieldLiner's unique pipe repair and rehabilitation system involves the insertion of a tool that travels along the pipe being rehabilitated, delivering and compacting resin to fill and repair cracks and holes whilst at the same time forming a continuous fibreglass liner which is bonded to the host pipe. The system requires two access points to the pipe. The liner package is introduced behind the ShieldLiner tool at one end and then inverted using an air pressure chamber. At the other end resin, catalyst, air and electronic monitoring wiring are delivered to the tool from a surface rig. The tool travels from the air pressure chamber access point towards the surface rig, driven by the inverting liner.

The major competitive advantages of the ShieldLiner system include lower costs, better sealing and reinforcement and repair of the existing pipe together with improved mechanical performance and faster project turnarounds. It is unique in that it leaves no annulus in the newly rehabilitated host pipe.

Vortex Cleaning

Vortex's Pipe Services division provides specialist pipe services, utilising leading edge technologies including:

- **CCTV pipe inspections**, (using robotic CCTV equipment, pole camera equipment and lateral camera equipment);
- **Whirlwind waterless pipe cleaning technology**;
- **Traditional pipe cleaning and jetting**, (using high pressure water and cutting equipment); and
- **Drain and gully cleaning** (utilising mechanical suction and vacuum equipment).

The Company is planning to expand capabilities in this area through the acquisition and license use of further unique cleaning technologies.

Vortex Composite Pipe

Vortex is the exclusive distributor for Australia and New Zealand for a range of glass reinforced epoxy ("GRE") pipes and fittings manufactured by FiberGlass Systems LP ("FGS") of San Antonio, Texas.

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FGS is a leading worldwide manufacturer of fibreglass reinforced epoxy pipe products used primarily **for corrosion control in low to high pressure applications of enhanced oil recovery projects**. The products also have **applications in the gas, water, marine offshore, industrial and chemical industries** and have temperature ratings of up to 220 degrees (104.4C), depending on resin system. Unlike steel pipes the pipes require no protective coatings and their use reduces maintenance costs caused by corrosion. The pipes are light and easy to handle and less personnel and equipment is needed during installation. FGS markets its products under the trade names Star, Smith and Fibercast.

Vortex is looking to further enhance its composite pipe solutions in the near future. This announcement relating to the QuickPipes Joint Venture is a further step in achieving this.

Background on Quickstep Holdings Limited - www.quickstep.com.au

Western Australian-based **Quickstep Holdings Limited** (ASX: **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 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 two machines at 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 has now been commissioned in Germany at the European Aeronautic Defence & Space Company (EADS) group facilities in Munich 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 self-manufacture, joint venture manufacturing arrangements and co-branding and co-marketing agreements with leading composites manufacturers, Original Equipment Manufacturers (OEM's), Tier One suppliers and alliance partners utilising the Quickstep Process.