

Media Release

AUSTRALIAN ROCKET COMPANY'S MILLION-DOLLAR COMPOSITE IDEA TO LIFT OFF

- *Queensland-based Gilmour Space Technologies is partnering with local manufacturers to develop new composite rocket tanks in Australia.*
- *New tank will reduce weight to boost revenue and payload capacity for Gilmour's orbital launch vehicles.*
- *The project will bring together Australian manufacturers to develop local capabilities feeding into the global space supply chain.*

Queensland-based rocket company, Gilmour Space Technologies, is developing a hybrid propulsion launch vehicle to deliver payloads of up to 250 kg into Low Earth Orbits (LEO) in service of the rapidly growing small satellite market. With co-funding from the the Advanced Manufacturing Growth Centre (AMGC), Gilmour Space is looking to manufacture a new, lighter, composite propulsion tank to increase rocket payload capacity by reducing the overall weight of their orbital launch vehicle.

Previously manufactured from aluminium, the tanks, while easier to produce, contributed to a large proportion of the vehicle's overall weight, impacting payload, fuel loads and overall efficiency. Gilmour anticipates that by using carbon fibre composite tanks for their three-stage rocket, they would be able to achieve a lower weight mass of close to 20 kilograms (kg) for their launch vehicle. The result would allow for almost a million dollars of additional cargo revenue to be transported into LEO per launch, leading to greater business opportunities and component export potential.

Gilmour's first composite tanks will be manufactured in collaboration with Sydney-based CST Aero using their filament winding process. This involves an automated process of wrapping resin-impregnated filaments (rovings or tows) in a geometric pattern over a rotating male mandrel, and then cured under high pressure and temperature.

Gilmour Space CEO and founder, Adam Gilmour said, collaborating with outside organisations has been the way to reach commercialisation more quickly. "AMGC has helped to provide critical linkages to industry partners in Australia,"

"Space is not just an R&D effort. It's a competitive and dynamic industry that provides real business and manufacturing opportunities for new and existing companies in Australia. We are working with CST Aero as our manufacturing partner in this AMGC grant to deliver rapid space capabilities for Australia even as we explore cutting-edge new technologies for the future." said Mr Gilmour.

This project will enable Gilmour Space to develop, design, test and produce high-quality carbon fibre wound rocket propellant tanks in Australia. The capability will enable this leading rocket company to manufacture and export lightweight, price-competitive rockets for customers around the world while serving Australia's rapidly growing space sector.

The project will also result in new space manufacturing capabilities in Australia, along with the addition of several new highly skilled and semi-skilled jobs. Other parties in the project include the University of Southern Queensland, Protonautics and Graphene Manufacturing Group.

Jens Goennemann, Managing Director for the Advanced Manufacturing Growth Centre said, "The relationship between Gilmour Space and its partners is further evidence that when Australian companies collaborate, they can achieve solutions to complex problems, resulting in a world-leading product,"

"AMGC is proud to partner with Gilmour Space which is yet another shining example of Australia's advanced manufacturing sector developing local solutions with significant global potential," said Dr Goennemann.

"CST Aero is an Australian company with a history in manufacturing large tubes and will now be expanding its capabilities to support Gilmour Space by manufacturing pressure vessels for liquid oxygen and hydrogen storage. With rapid prototyping and testing facilities in-house, it is CST Aero's ambition to reduce the lead time and cost of composites for the Aerospace Industry," said company spokesperson, Chris Dixon.

AMGC and Gilmour will be contributing \$224,500 each in matched funding to this project. AMGC has also provided valuable linkages to Australian manufacturers contributing complex physical and technical inputs for space travel.

For further information relating to this project visit – <https://www.amgc.org.au/project/composite-wound-rocket-tanks/>

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About Advanced Manufacturing Growth Centre (AMGC)

The Advanced Manufacturing Growth Centre (AMGC) is an industry-led, not-for-profit organisation established through the Australian Government's Industry Growth Centres Initiative. AMGC's vision is to transform Australian manufacturing to become an internationally competitive, dynamic and thriving industry with advanced capabilities and skills at its core.

Through the delivery of its world-leading research, Manufacturing Academy, workshops, and ground-breaking projects, AMGC aims to develop a highly skilled and resilient local manufacturing sector that delivers high-value products – via the integration of innovative technology – to domestic and international markets.

<http://www.amgc.org.au>

About Gilmour Space

Gilmour Space Technologies is a leading venture-funded rocket company in Queensland, Australia, that is pioneering new hybrid propulsion technologies for launch. Our near-term mission is to provide more affordable and reliable rockets dedicated to launching the next generation of small satellites into Low Earth Orbits. Our vision is to reach 'All Orbits, All Planets' for the benefit of humanity.

<http://www.gspacetech.com/>

Industry Growth Centres

The Australian Government targets sectors of competitive strength and strategic priority through the Industry Growth Centres Initiative. The Industry Growth Centres Initiative is strategic, sector based approach to growing our industries and creating jobs by focusing on areas of competitive strength and strategic priority. This approach supports economic growth and job creation for all Australians.

The six Industry Growth Centres address barriers to productivity, competitiveness and innovative capacity to support the growth of the Australian economy.

For more information: www.industry.gov.au/industrygrowthcentres

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