

22 September 2020

Test Work with Ascent Shipwrights Confirms that PureGRAPH Significantly Improves FRP Boats

HIGHLIGHTS

- **PureGRAPH® products successfully demonstrated in the boat building sector**
- **PureGRAPH® was easily incorporated into an existing production process**
- **Test work demonstrates PureGRAPH® provides significant mechanical improvements in standard construction materials**
- **Better than 59% increase in ultimate flexural stress compared to existing composite material**
- **Ascent Shipwrights are a premier boat builder providing boat repair, builds and modifications of the highest quality**
- **Potential to unlock the very large boat building market**

First Graphene Limited ("ASX: FGR" or "the Company"), is pleased to advise on a **successful** collaboration with Ascent Shipwrights working on the development of PureGRAPH® enhanced composite construction materials used in fiberglass boat building applications.

Composite boats are fabricated using a composite core material sandwiched between layers of fibre reinforced polymer (FRP) to create a strong and lightweight structure.

The incorporation of PureGRAPH® into the FRP laminate aimed to improve the mechanical properties of the overall composite system, whilst also providing an additional barrier to moisture intake and hydrolysis attack.

The Company is pleased to report that initial test work has been completed using a conventional high strength core material to evaluate the performance of increasing PureGRAPH® 20 concentrations compared to a control system being used at present. The composite materials were produced using existing production methods at Ascent Shipwrights to generate the results displayed in Figure 1.

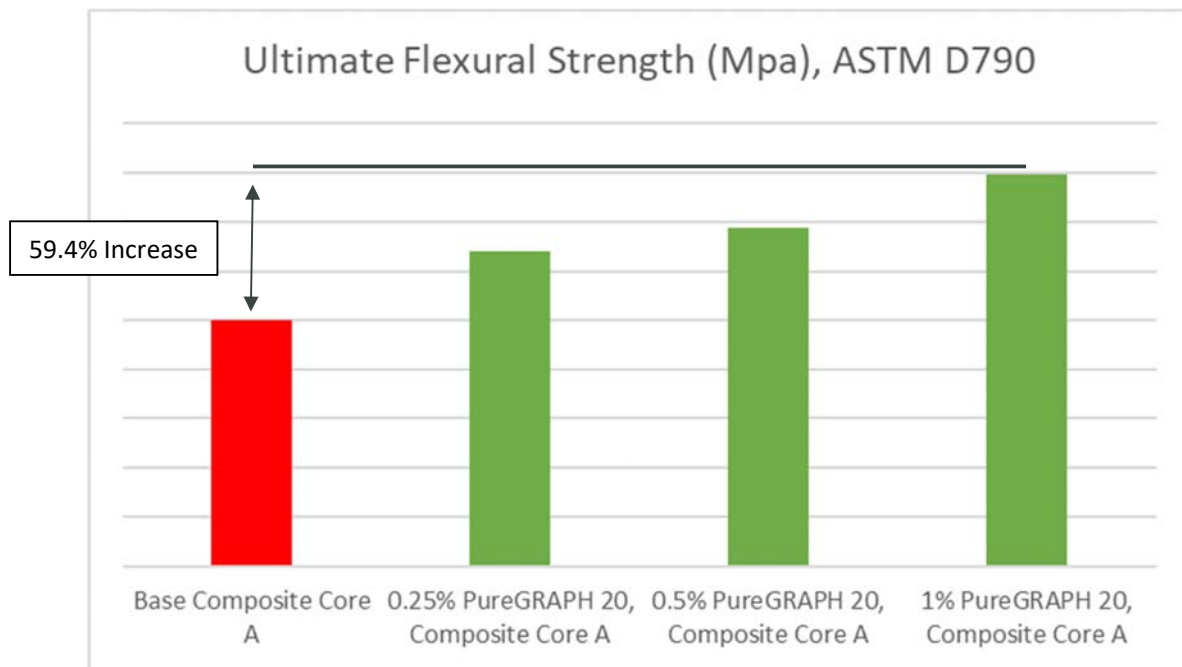


Figure 1 Ultimate flexural stress for increased PureGRAPH[®] concentrations in FRP laminate compared to control composite.

Figure 1 details significant increase of 59.4% in ultimate flexural stress for a 1% addition rate of PureGRAPH[®] 20 within the FRP laminate. This result demonstrates the enormous potential for PureGRAPH[®] enhanced composite structures within the boat building industry and how the material can easily be incorporated within an existing production process.

Larger scale testing is being planned to look at a variety of core materials and PureGRAPH[®] enhanced FRP compositions. Further laminates have been produced for accelerated weathering testing, where improvements in hydrolysis resistance, water diffusion and UV resistance are anticipated. FGR will provide updates to the market as test work progresses.

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FGR's Accelerated Weathering Tester running a 1,000 hour test to ASTM G154 standards for composite materials.

Craig McGuckin, Managing Director for First Graphene Ltd., said: *"Following on from the significant improvements achieved with the introduction of PureGRAPH® into fiberglass pools this is our first extension into the boat building market. FGR identified Ascent Shipwrights as an ideal collaborator and moved quickly to evaluate graphene technology."*

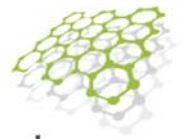
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Typical boat rebuild using highly engineered composite panels.

Ascent Shipwrights have been impressed with the ease of introducing PureGRAPH® into their operations and have indicated their intention to move towards the use of PureGRAPH® in future operations.

The significant improvements achieved in flexural strength opens up the opportunity to provide significant improvements to ocean going fiberglass boats while having the capacity to reduce the weight of recreational power and sail craft.



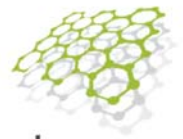
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FGR's Neil Armstrong and Ascent Shipwrights Managing Director Daniel Roberts



Typical finished bespoke rebuild



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Daniel Roberts, Managing Director for Ascent Shipwrights., said *"Working with FGR we have achieved a quick turnaround on the incorporation of their PureGRAPH® powder into our resin process. The light weighting and strength improvements offer excellent opportunities for our business."*

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About First Graphene Ltd (ASX: FGR)

First Graphene Ltd. is the leading supplier of high-performing, graphene products. The company has a robust manufacturing platform based upon captive supply of high-purity raw materials and an established 100 tonne/year graphene production capacity. Commercial applications are now being progressed in composites, elastomers, fire retardancy, construction and energy storage.

First Graphene Ltd. is publicly listed in Australia (ASX:FGR) and has a primary manufacturing base in Henderson, near Perth, WA. The company is incorporated in the UK as First Graphene (UK) Ltd. and is a Tier 1 partner at the Graphene Engineering and Innovation Centre (GEIC), Manchester, UK.

PureGRAPH® Range of Products

PureGRAPH® graphene powders are available in tonnage volumes with lateral platelet sizes of 20µm, 10µm and 5µm. The products are high performing additives, characterised by their high quality and ease of use.

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With authority of the board, this announcement has been authorised for release, by Peter R. Youd Director, Chief Financial Officer and Company Secretary.