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BNNT RESEARCH PARTNERSHIP WITH DEAKIN UNIVERSITY

HIGHLIGHTS

- **AML3D and Deakin University's Institute for Frontier Materials (IFM) announce a series of collaborative feasibility projects to explore the use of Boron Nitride Nanotubes (BNNTs) to revolutionise Wire Additive Manufacturing (WAM®) Technology, with the proposed new composite having far reaching commercial industry implications for 3D metal printing globally.**
- **Motivated by preliminary research, the targeted BNNT – Aluminium composite may have revolutionary properties that open a range of new industry and production possibilities for AML's patented WAM® technology.**
- **The new project highlights a deepening of the partnership between AML3D and Deakin University, as well as the strengthening of its technological and competitive advantage.**

AML3D Limited (ASX: AL3) ("**AML3D**" or "**the Company**") is pleased to announce a series of exciting new proof-of-concept projects with Deakin University, exploring the incorporation of Boron Nitride Nanotubes (BNNTs) technology to revolutionise AML3D's WAM® technology. Two new feasibility studies are confirmed and are ready to commence immediately, which will explore two new techniques for incorporating BNNTs into aluminium in the context of Wire Additive Manufacturing with a view to fast-track commercialisation.

Boron Nitride Nanotubes (BNNTs) are the world's strongest and most advanced fibre, with the capacity to greatly enhance the properties of WAM® deposited alloys. Addition of BNNTs to aluminium and other metals can create much stronger, lighter, and more thermally and radiation resistant alloys, greatly expanding the range of applications of AML3D's patented WAM® technology in the key industry sectors of space, aerospace, marine, defence, and transport.

Boron Nitride Nanotubes (BNNTs):

STRONGER
100 times stronger than steel, 30 times stronger than Kevlar.



LIGHTER
Lighter than carbon – fibre.



THERMALLY CONDUCTIVE
7.5 times more thermally conductive than copper.



TRANSPARENT
Thermally and optically, supporting commercial application in new areas such as glass.

THERMALLY RESISTIVE
Can withstand temperatures of over 900 degrees Celsius, 1000's of times without failure.



RADIATION RESISTANT
Absorbing neutron atoms allows BNNTs to open huge new possibilities for space applications.



https://www.chemistryworld.com/news/boron-nitride-nanotube-composites-outperform-their-carbon-cousins/9341.article

https://blogs.deakin.edu.au/manufutures-learning-portal/our-partners/bnnt-technology-limited/

https://www.deakin.edu.au/about-deakin/news-and-media-releases/articles/deakins-boron-nitride-nanotubes-bnnt-are-pure-and-industry-ready

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AML3D sees these projects, funded by the Company, as an opportunity to develop novel and transformative products with far reaching implications for its WAM process and 3D metal printing industry.

Encouraged by existing research within the BNNT space identifying the enhanced properties of the nanomaterial, AML3D sees the new projects as a step towards widespread commercial adoption of the material. With improving global production capacity and falling per unit production costs, BNNTs are anticipated to revolutionise the advanced materials market, and AML3D is excited to spearhead the augmenting of this emerging technology with 3D metal printing, furthering the competitive advantage of its patented WAM® technology.

Having previously collaborated with Deakin University on several projects, AML3D is also excited to begin new ventures with the leading research institution.

Commenting on the partnership with Deakin University, AML3D Managing Director Mr. Andrew Sales said:
"*The recent success of our current and ongoing high strength alloy developments for our patented WAM® process, has identified a further significant commercial opportunity for AML3D by incorporating BNNT into our wire feedstock. I'm extremely encouraged by this new development and hence why we are commencing another two projects separately to our current program. Successful development of these particular alloys has the potential to provide the company with significant upside. The opportunities for products and components has application across all our target sectors and has the potential to add another game changing opportunity for us here at AML3D.*"

Andrew Rau, Senior Commercial Manager at Deakin University commented,

"*Deakin University is genuinely excited to be collaborating with AML3D to explore the feasibility of incorporating BNNTs with Aluminium, utilising AML's patented WAM® technology. This research presents a unique opportunity to develop advanced materials with superior performance and develop a range of new applications for AML3D and their customers.*"

This announcement has been authorised for release by the Board of AML3D.

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About AML3D Limited

AML3D Limited, a publicly listed technology company founded in 2014, utilises new technologies to pioneer and lead metal additive manufacturing globally. Disrupting the traditional manufacturing space, AML3D has developed and patented a Wire Additive Manufacturing (WAM®) process that metal 3D prints commercial, large-scale parts for Aerospace, Defence, Maritime, Manufacturing, Mining and Oil & Gas. AML3D provides parts contract manufacturing from its Technology Centre in Adelaide, Australia, and is the OEM of ARCEMY®, an industrial metal 3D printing system that combines IIoT and Industry 4.0 to enable manufacturers to become globally competitive.