

# Titomic aligns with Osaka Titanium technologies & Marubeni

- Titomic secures aerospace-grade, gas-atomised Titanium powder supply from OTC
- TKF systems to be distributed by Marubeni in Japan and South Korea
- New global markets for TKF via Marubeni Automotive & Heavy Industries Networks
- Parties to develop new metal powders & powder technologies for TKF systems

**Melbourne, Australia, 27<sup>th</sup> March, 2019:** Australian metals and materials manufacturing company Titomic Limited (ASX: TTT) ("Titomic" or "Company") today announces it has executed a Memorandum of Understanding ("MoU") with Japanese companies Osaka Titanium technologies Co. Ltd.("OTC") and Marubeni Corporation ("Marubeni"), to distribute Titomic Kinetic Fusion ("TKF") systems in Japan and South Korea and supply aerospace-grade gas-atomised titanium metal powders globally.



From Left: Mr. Sean Kim (Marubeni), Mr. Hideaki Kanno (OTC), Mr. Masashi lizuka (OTC), Mr. Yoshihisa Ohashi (OTC), Mr. Jeffrey Lang (Titomic), Mr. Peter Vaughan (Titomic), Ms, Rose Wang (Marubeni) at Osaka Titanium technologies, Japan.

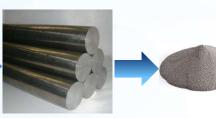
## **Titanium Powder Production Process**







**Titanium Alloy Ingot** 



Titanium Alloy Bar



## Strategic Fit with OTC and Marubeni

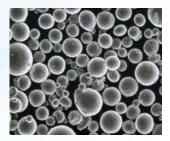
Titomic has tested OTC's aerospace-grade Titanium powder as being suitable for use in TKF systems.

The MoU with OTC and Marubeni has several strategic advantages to further improve Titomic's positioning and progress:

TKF Systems Distribution	Titomic to leverage off Marubeni's extensive global customer network into energy, metals, power generation, shipping, heavy industries and automotive markets to distribute TKF systems for revenue opportunities.
Metal Powder Supply	Titomic secures supply of aerospace-grade gas atomized spherical powder from well- established market leading Titanium producer, OTC
Creating New Market Applications	Titomic and OTC to develop new Titanium powder manufacturing technologies for TKF systems to enable new commercial opportunities through the supply large volumes of Titanium powder for automotive and heavy industries

These elements combine to give Titomic:

- An expanded global network for TKF System distribution and production run demand;
- Secured supply chain for metal powders required for high value applications; and
- Ongoing access to cutting-edge material science and next generation Titanium alloy powders for TKF systems.



Titanium Low Oxygen Powder TILOP (Gas-atomized titanium powder) *TILOP 100x magnification* 

Titomic Managing Director, Jeff Lang commented:

"Titomic's partnering with OTC and Marubeni secures supply of the highest-quality aerospace-grade Titanium powder, from a reputable global corporation, aligning with Titomic's development strategies in Aerospace and Defence.

This partnership will enable the development of new Titanium powder technologies which, when combined with Titomic's TKF automated production systems, drives new revenue opportunities through high volume production of titanium parts for automotive and heavy industries.

Marubeni General Manager, Mr. Yusuke Yamamoto commented:

"Marubeni has been supplying titanium raw materials to OTC for decades. We're very happy to have this opportunity to support OTC and Titomic in a new field of titanium powder. We believe the demand for TKF system and powder supply has significant potential in the future. We also believe we will have a great success through combining Titomic's leading-edge technology, OTC's high-quality titanium powder and our network in the world."

Osaka Titanium technologies Managing Executive Officer, Mr. Yoshihisa Ohashi commented:

"OTC is proud to announce our partnering with Titomic for supplying Titanium powder for the TKF system.

We appreciate that Titomic identifies OTC as being such a high-quality producer of Titanium powder with a longhistory of being a global leading producer in high quality Titanium sponge. We are excited to be collaborating with such an innovative global leader of industrial scale, high volume additive manufacturing as Titomic and are keen to create new commercial opportunities for Titanium powder which can currently only be realised using the TKF process."

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#### About Titomic Limited:

Titomic (ASX:TTT) is headquartered in Melbourne, Australia. Titomic is positioned to change the value proposition of Titanium, to unlock new applications and open opportunities that are now technically and economically viable with its proprietary Titomic Kinetic Fusion<sup>™</sup> (TKF) technology platform.

TKF overcomes the limitations of additive manufacturing (3D printing) for metals to manufacture complex parts without shape or size constraints. TKF offers production run capability, sale & leasing of systems to organisations, which enables speed-to-market, superior products with lower production inputs using fewer resources for a more sustainable future.

Titomic's TKF enables first mover advantage in industrial scale manufacturing for sectors such as aerospace, defence, resources (oil & gas, mining, rail, chemical & industrial equipment), marine, construction, automotive, medical and consumer & sporting goods.

For more information, visit: www.titomic.com



OSAKA Titanium technologies Co., Ltd.

#### About Osaka Titanium technologies Co., Ltd. (OTC):

OTC is one of the world's largest titanium sponge manufacturers and has a history of more than 60 years. OTC began the mass production of commercial pure titanium powder starting in 1994 by using an Electrode Induction Gas Atomisation process and has been continuing for more than 20 years. OTC has also started mass production of titanium alloy powder for additive manufacturing, as it is being put into practical use in various fields such as aerospace and medical application. For more information, visit: <a href="https://www.osaka-ti.co.jp/e/">www.osaka-ti.co.jp/e/</a>



### About Marubeni Corporation:

Marubeni is a major Japanese integrated trading and investment business conglomerate that handles products and provides services in a broad range of sectors including food, consumer products, chemical & forest products, energy & metals, power & plants projects, and transportation & industrial machinery. For more information, visit: <a href="https://www.marubeni.com/en/">www.marubeni.com/en/</a>