



8 May 2019

PATENT COVERAGE FOR TNG'S PROPRIETARY TIVAN® PROCESS FOR EXTRACTION OF VANADIUM EXTENDED TO VIETNAM

Approvals for EU and China in progress

Australian strategic metals company TNG Limited (ASX: TNG) ("TNG" or the "Company") is pleased to advise that patents for its proprietary TIVAN® hydrometallurgical process for the extraction and recovery of high-purity vanadium have now been extended with approval received from Vietnam.

The award of the patents, which reflects the robustness of its process, provides a level of protection and security for the Company for one of its core pieces of Intellectual Property as it reaches the final stages of pre-development for its flagship Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory.

The TIVAN® Process patent is based on the extraction and recovery of vanadium and was developed by TNG and its metallurgical consultants, Perth-based METS Pty Ltd. The process is the backbone of the project which allows the Company to extract vanadium, titanium and iron in commercial grades and quantities from its resource.

The Company's long-term business plan is for the TIVAN® Process to be developed for licensing globally, which could potentially be highly lucrative for TNG and its shareholders.

The global patent process is being managed by Perth-based patent lawyers WRAYS. Approvals for China, South Africa and the European Union are also currently in process.

TNG's Managing Director, Mr Paul Burton, said: *"We are very pleased to see acceptance of our process in Asian jurisdictions, which complements our existing patent protection in Australia, Russia, Canada and the USA. We expect to receive approvals for the other countries in due course, paving the way for future licensing of the TIVAN® process globally – a business strategy which could generate significant returns for the Company."*

TNG also owns the trademark "TIVAN®".

Copies of the recently granted patents and trademarks are attached to this announcement for shareholders' reference.

Paul E Burton
Managing Director

8 May 2019

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**About TNG**

TNG is building a world-scale strategic metals business based on its flagship 100%-owned Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory. Located 235km north of Alice Springs, Mount Peake will be a long-life project producing a suite of high-quality, high-purity strategic metals products for global markets including vanadium pentoxide, titanium dioxide and iron ore fines. The project, which will be a top-10 global producer, has received Major Project Facilitation status from the Northern Territory Government.

Vanadium is a highly strategic metal which is used as an alloy in steel. It is also in strong demand for use in energy storage, with vanadium redox batteries used to store electricity generated by solar and wind power, and lithium-vanadium ion batteries used to power hybrid cars.

Forward-Looking Statements

This announcement has been prepared by TNG Limited. This announcement is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained.

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TIVAN®

PATENT AND TRADE MARK STATUS

TIVAN® Patent Status

A Method for Extraction and Recovery of Vanadium	
Australia	REGISTERED
Canada	REGISTERED
Russian Federation	REGISTERED
United States of America	REGISTERED
Vietnam	REGISTERED
China	FILED - IN PROGRESS
European Patent Federation	FILED - IN PROGRESS
A Method for Preparing a Leach Feed Material	
Australia	FILED - IN PROGRESS
Titanium Dioxide Pigment Production Method	
Australia	IN PREPARATION

TIVAN® Trade Mark Status

Registered in the following regions:

Australia
Canada
China
European Union
Madrid Protocol
Russian Federation
South Africa
United States of America

Find out more at tngitd.com.au

11



CERTIFICATE OF GRANT

STANDARD PATENT

2011256118

The Commissioner of Patents has granted the above patent on 21 July 2016, and certifies that the following are the particulars of this patent appearing in the Register of Patents:

Name and Address of Patentee(s):

TNG Limited

Level 1 282 Rokeby Road Subiaco WA 6008 Australia

Name of Actual Inventor(s):

Connelly, Damian Edward Gerard; Yan, Denis Stephen and Lam, Sai Wei

Title of Invention:

Method for the extraction and recovery of vanadium

Term of Patent:

Twenty years from 5 May 2011

Priority Details

Number
2010902191

Date
19 May 2010

Filed with
AU

Dated this 21st day of July 2016

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



CERTIFICATE OF REGISTRATION

The International Bureau of the World Intellectual Property Organization (WIPO) certifies that the indications appearing in the present certificate conform to the recording made in the International Register of Marks maintained under the Madrid Agreement and Protocol.

Ásta Valdimarsdóttir
Ásta Valdimarsdóttir
Head of the Operations Service
International Registries of Madrid and Lisbon
Brands and Designs Sector

Geneva, May 10, 2012

1113988

Registration date: November 18, 2011
Date next payment due: November 18, 2021

TNG Limited
Level 1
282 Rokeby Road
SUBIACO
WA 6008
(Australia)

Legal nature of the holder (legal entity) and place of organization: Limited Company, Australia.

Name and address of the representative: Wray's, Ground Floor,
56 Old Street, West Perth WA 6005 (Australia).

TIVAN

Indication relating to the nature or kind of mark: standard characters

List of goods and services - NCL(9):

1 Titanium and/or iron containing compounds for industrial use; metal oxides; metallic oxides; processed minerals;

raw mineral substances; chemical products for use in the extraction and recovery of minerals; industrial minerals.

6 Metals, including vanadium, titanium and iron; alloys of vanadium, titanium and/or iron; ores of metal; processed metal ores; vanadium.
40 Mineral processing services, including those directed to the extraction and recovery of vanadium, titanium and/or iron metal or compounds containing these metals; metallurgical processing; processing of metallic materials.
42 Engineering consultancy, including these services directed to methods of mineral processing and recovery; gas; oil, petroleum and minerals exploration; metallurgical analysis, testing and laboratory services; engineering testing; research, engineering and technical consultancy relating to the development of technologies.

Basic application: Australia, 09.06.2011, 1429747.

Designations under the Madrid Protocol: China, European Union, Russian Federation, United States of America.

Declaration of intention to use the mark: United States of America.

Date of notification: 10.05.2012

Language of the international application: English

WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

34, chemin des Colombettes
1211 Geneva 23, Switzerland
www.wipo.int



CERTIFICATE OF REGISTRATION OF TRADE MARK

No. 1429747

I, **Fatima Beattie, Registrar of Trade Marks** hereby certify -

that the trade mark represented on this certificate was filed as Trade Mark No. 1429747 on 9 June 2011. It is due for renewal on 9 June 2021 and TNG Limited ACN/ARBN 000 817 023 of Level 1 282 Rokeby Road SUBIACO WA 6008 AUSTRALIA has been entered in the Register of Trade Marks as the owner of the trade mark.

TIVAN

The goods and/or services for which the trade mark is registered, plus any endorsement, additional owners or other information relating to the registration, are listed on the attached pages.

Given under my hand and the seal of the Trade Marks Office on 5 March 2012



Fatima Beattie
REGISTRAR OF TRADE MARKS

TRADE MARKS ACT 1995

The United States of America



The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Joseph Matal

Performing the Functions and Duties of the
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office



BỘ KHOA HỌC VÀ CÔNG NGHỆ

CỤC SỞ HỮU TRÍ TUỆ

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập - Tự do - Hạnh phúc

BẰNG ĐỘC QUYỀN

SÁNG CHẾ

Số: 20488

Tên sáng chế: PHƯƠNG PHÁP CHIẾT VANADI
Chủ Bằng độc quyền: TNG LIMITED (AU)
Level 1, 282 Rokeby Road, Subiaco, Western Australia 6008, Australia
Tác giả: CONNELLY, Damian Edward Gerard (AU), YAN, Denis Stephen (AU), LAM, Sai Wei (MY)
Số đơn: 1-2012-03558
Ngày nộp đơn: 05/05/2011
Số điểm yêu cầu bảo hộ: 14
Số trang mô tả: 34
Cấp theo Quyết định số: 3729/QĐ-SHTT, ngày: 15/01/2019
Có hiệu lực từ ngày cấp đến hết 20 năm tính từ ngày nộp đơn (Hiệu lực bảo hộ cần duy trì hàng năm).



KT. CỤC TRƯỞNG
PHÓ CỤC TRƯỞNG

Phan Ngan Son
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