DIMER

DIMER is leading the world in gas processing, power-to-gas, CCUS, clean enegy development, and energy efficiency.

01 About Us



THE PART ONE

About Us



Dimer Technologies was founded by leading experts originally from Australia's CSIRO and National Research Centre of Greenhouse Gases (CO2-CRC), and have continuing cooperation with Australian CO2-CRC, Commonwealth Scientific and Industrial Research Organization (CSIRO), Air Products & Chemical of USA, Norton Engineering of USA, The University of Melbourne and Monash University.

State-of-the-Art R&D Facilities and world-leading Labs

DIMER has advanced R&D facilities and world-leading labs backed up by SINOPEC-Tianjin, UniMelb, CSIRO, CO2-CRC and Monash for design and development of superior gas technologies. DIMER's R&D strengths include advanced materials, process design and engineering, technology industrialization, and tailor-made technology & engineering solutions.

About Us



DIMER has developed the state-of-the-art gas technologies on separation and capture of greenhouse gases (such as CO2, CH4, VOCs), hydrogen recovery and purification, renewable power-to-H2, natural gas purification and recovery, CCUS, oxygen enriched combustion and CH4 liquification.

DIMER's gas technologies were granted the patents from Australia, USA, and Europe etc. (USA patent No. 20110005389; Intl No.PCT/AU08/01831 (covering USA, China, India and Europe); Australian patent No. 2008336265 + No.2013201122/No.2016201267; Chinese patents No.201611219796.5 + No.201621438243.4. DIMER has the full ownership or exclusive execution rights of these patents.



02 Technologies



THE PART TWO

Technologies



Gas Processing Technologies

DIMER has developed superior gas processes and advanced materials for

- Low carbon energy gas (such as H2, CH4 and hydrocarbons)
- Treatment of industrial off-gas
- Gas condensation or liquefaction
- Carbon capture and CCUS



Technologies



Power-to-Gas Technologies

Targetting energy storage and hydrogen energy application, DIMER builds up novel technologies and engineering capability of

- Renewable power to hydrogen (Power-to-H2)
- CCUS to MeOH or methanation
- Hydrogen energy applications

Clean Energy Development

DIMER is teaming up with TeraSolar and partners to build renewable electricity/steam/hot-water for community, industrial and agricultural applications.

- Solar thermal energy
- Microgrid & micro-energy system

03 Projects



Projects



DIMER specializes in the design, development and engineering of processing and power-togas technologies for industrial gas production and off-gas treatment.

Compared to conventional technology, DIMER solutions provide higher efficiency, lower pressure and lower running-cost when producing, capturing, separating and condensing various industrial gases (such as H2, CH4, CO2 and VOCs).

DIMER's innovative solutions have been applied in both Australia and around the world.

H2/CH4 recovery and CO2 capture from refinery tail-gas

SINOPEC, Stage 1: 2015 - 2017; Stage 2: 2018 - present.

Refinery process uses general PSA to produce hydrogen via steam methane reforming. The hydrogen and methane is usually used for down-stream processes. However, this PSA-H2 system produces a large amount of combustible tail-gas (e.g., 31% H2 and 49% CO2). DIMER has developed an advanced VSA/PSA system for SINOPEC-Tianjin to recover hydrogen and methane and capture CO2 from the tail-gas. This technology is helping SINOPEC reduce their greenhouse gas emission, as well as create hydrogen-based clean energy.



Projects





Industrial waste-gas management

2019 - Present



Smart microgrids based on H2 energy and/or BESS

2018 - Present

Thank you

Shanghai Office

Shanghai, China 20-21F DBS Bank Tower, 1318 Lujiazui Ring Road, Pudong New Area, Shanghai, China 200120

T: +86 21 6886 9881

F: +86 21 6886 9882

E: info_at_dimer.com.au

Head Office

Level 27, 101 Collings Street, Melbourne 3000 Australia

T: +61 3 96536499

E: info at dimer.com.au

Guangzhou Office

Guangzhou, China 30F One Bravo, 1 Jinsui Road, Tianhe Disgtrict, Guangzhou, China 510623

T: +86 20 8638 8698

F: +86 20 8638 8798

E: info_at_dimer.com.au