

# MINERALS & ENERGY OPERATIONS IN AUSTRALIA

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## History

Iwatani Corporation was founded in Japan in 1930 to provide gas and energy based on its corporate philosophy of ‘Become a person needed by society, as those needed by society can prosper’. The Company’s traditional strength has been in energy, a broad sector that encompasses LPG, portable gas stoves, industrial gases such as hydrogen and other segments.

Iwatani’s business is based on 4 core divisions being: Energy, Industrial Gases and Machinery, Materials and Agri-Bio Foods, employing approximately 10,130 people globally across 230 affiliated companies. Since 1941, Iwatani has regarded hydrogen as the ultimate clean source of energy and has consistently engaged in initiatives to encourage its widespread use. In Japan, Iwatani has successfully captured 70% of the country’s hydrogen market and 100% of the liquid nitrogen market share. Iwatani is Japan’s only liquid hydrogen supplier with an annual production capacity of 120 million m<sup>3</sup> across six plants and 10 compressed hydrogen plants across Japan.

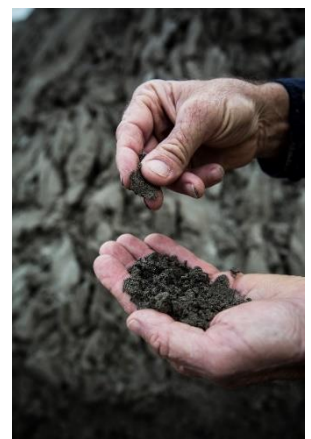
Iwatani Australia (previously known as Doral Pty Ltd) is a subsidiary of Iwatani Corporation and includes the Doral Group of companies being Doral Mineral Sands and Doral Fused Materials, which operates under the Materials Division. Iwatani Australia has been operating in Western Australia since 1982 with its head office located in Rockingham, Western Australia, employing 115 personnel across all business divisions, in addition to an extended contractor and supply chain network. Iwatani operates in accordance with its core purpose, being: ‘To enrich our stakeholders by adding value to natural resources in sustainable and innovative ways’.

In Australia, mineral sands and fused zirconia represents Iwatani’s core business, focused on the expansion of its mining and processing operations through exploration, supply and acquisition opportunities.

## Materials Division in Australia – Doral Group of Companies

**Doral Mineral Sands (DMS)** has been operating in the southwest of Western Australia since 2002 and has longstanding expertise in mining, rehabilitation and mine closure associated with mineral sands production. Current mining operations include Keysbrook, located 70kms south of Perth and the Yalyalup project, located 17kms south-east of Busselton which is due to commence construction late 2021. Combined, both have an anticipated mine life until 2025 with potential to extend until 2030 based on further exploration. The Yoongarillup mine, located near Yalyalup, ceased mining in October 2020 and is currently in a rehabilitation phase.

Heavy mineral concentrate (HMC) which contains the final products of leucoxene, ilmenite and zircon is exported through the Ports of Bunbury and Fremantle and sold to longstanding customers, both locally and overseas.



Heavy Mineral Concentrate

**Doral Fused Materials (DFM)**, located in Rockingham and operating since 1990, manufactures fused zirconia which is generated in electric arc furnaces by reacting high purity raw materials to a fusion point of 2800°C. After cooling, the fused zirconia is crushed, milled, sized and packaged according to customer requirements. Silica fume is produced as a co-product formed in the manufacture of fused zirconia.

In addition, Iwatani Corporation has a significant presence in the supply of materials for Electric Vehicles (EV's) into the Japanese market. Accordingly, Iwatani Australia has an interest in establishing battery materials and rare earth businesses within Australia.



Fused Zirconia Plant, Rockingham

## Australian hydrogen developments

Iwatani Corporation is a key partner in the HESC project (Hydrogen Energy Supply Chain), located in Hastings and Latrobe Valley, Victoria which aims to produce clean liquid hydrogen using Victorian coal, together with future carbon capture and storage technology.

The project is currently in the pilot production stage with the aim of developing and commissioning its commercial plant by 2030. The pilot plant will commence small scale production in 2021 and includes experienced partners being: AGL, Marubeni Corporation, Sumitomo Corporation, Kawasaki Heavy Industries, HEA, J-Power Group and supported by the Victorian Government.

In November 2020, Iwatani Corporation announced a joint partnership with the Queensland State owned electricity generator, Stanwell Corporation. In 2019, Stanwell and Iwatani commenced a concept study to produce and liquify hydrogen from renewable energy sources such as wind and solar and then ship by specially designed carrier to the Japanese market. In June 2021, Stanwell secured land in Aldoga, west of Gladstone, chosen based on its proximity to the port, power and pipeline infrastructure.

In December 2020, Fortescue Metals Group, Kawasaki Heavy Industries and Iwatani signed an MOU to produce and transport liquified hydrogen in the Asia Pacific region. Under the MOU, the three parties will establish the Global LH2 Consortium to facilitate collaboration for the establishment of large scale, liquid hydrogen production and supply capabilities.

To focus on the delivery and commercialisation of its hydrogen-related activities in Australia, Iwatani established a Brisbane office in September 2021.

All hydrogen projects remain under consideration with the relevant partners however these announcements are a positive step for Iwatani to grow and develop its hydrogen production in Australia and to establish future global hydrogen supply chains.



## Outlook

Iwatani Australia, through its Doral Group of Companies, will continue to develop and pursue opportunities in Australia to secure the strategic supply and processing of minerals and energy to meet its long-term business and environmental objectives.

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