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Meidensha Corporation

To members of the media

Meiden Singapore to collaborate with PUB on a demonstration project to utilise Ceramic flat-sheet membranes to improve energy efficiency for seawater desalination

Meiden Singapore Pte. Ltd. (Meiden Singapore), an overseas subsidiary of Meidensha Corporation (Meiden) will commence the implementation of a first large scale demonstration plant using Ceramic Flat-Sheet Membranes for the pre-treatment of seawater reverse osmosis (SWRO). Following promising results from a pilot project in collaboration with PUB, Singapore's National Water Agency between March 2021 and December 2023, Meiden Singapore is taking the research one step further to construct a demonstration plant to validate stable operations with energy savings.

The demonstration plant will be co-funded by Meiden, National Research Foundation, Singapore and PUB under the Living Lab (Water) Programme. It will be located within PUB's Tuas Desalination Plant (TDP) and will involve the retrofitting of the Dissolved Air Flotation (DAF) System at TDP. The demonstration plant will have the capacity of treating feed water of up to 7 million gallons (nearly 32,000 cubic meters) per day as the feed to the downstream SWRO and is expected to be commissioned by April 2025.

■ Enhancing energy efficiency for treating desalinated water

As an alternative to the conventional pre-treatment technology of combining DAF and polymeric ultrafiltration membranes, using only the ceramic flat-sheet membranes without DAF during the filtration process has the benefits of lower energy consumption and effective treatment of feed water in the event of algae blooms, oil and grease spills.

Meiden's submerged-type ceramic flat-sheet membrane, which are known to have longer lifespans, higher permeability, and more robust properties, can be seamlessly installed

in the existing tanks available in the desalination plants. These membrane features allow the installation costs to be minimized and contribute to higher economic performance.

Since Meiden signed a memorandum of understanding (MOU) with PUB concerning the joint development of water treatment technologies in 2010, the two parties have conducted demonstration research at various water treatment plants in Singapore. Meiden continues to maintain a strong presence in Singapore with over 300 employees currently and is on the lookout for more opportunities to expand its ceramic membrane business here.

- Meiden Singapore Pte. Ltd.

Established in 1975, it is engaged in manufacturing and selling transformer products. In addition, Meiden also assembles and sells ceramic membrane units which includes specific engineering work.

Link: [https:// www.meidensha.com/msl/](https://www.meidensha.com/msl/)

- Ceramic Flat-sheet Membrane



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