

**MAEDA MATERIAL Co., Ltd.**

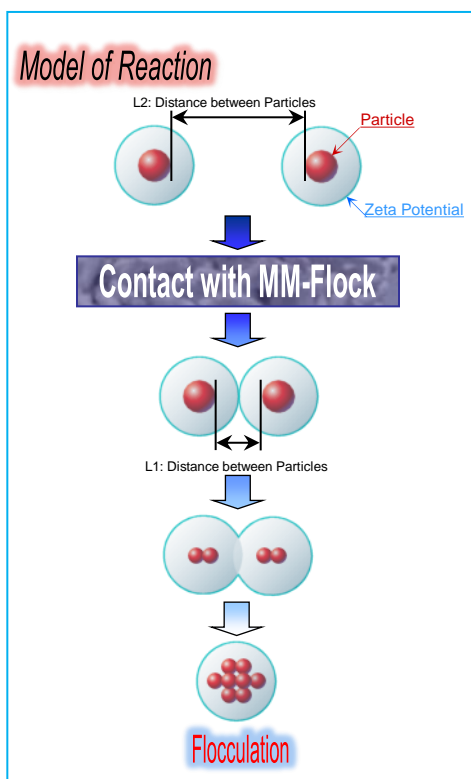
# Well Water/River Water Purifiers and Treatment Chemicals

• Equipment for purifying well water and river water into drinking water and water treatment chemicals MMF (made from ceramic)

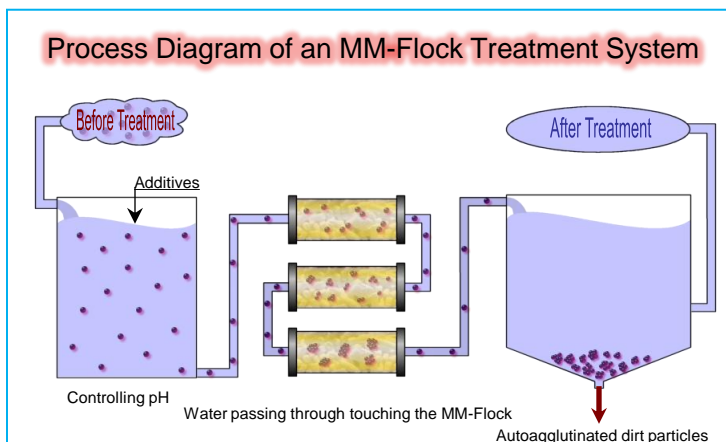
## Features

- This system settles silt in well water and river water, and converts supernatant into drinking water with an RO purifier.
- The compact equipment can be easily installed in a small space and run at low cost.
- MMFs (made of ceramic water purification material) have a wide range of applications from purifying well water and river water to treating industrial wastewater.
- MMFs efficiently flocculate SSs that cannot be separated by conventional methods.

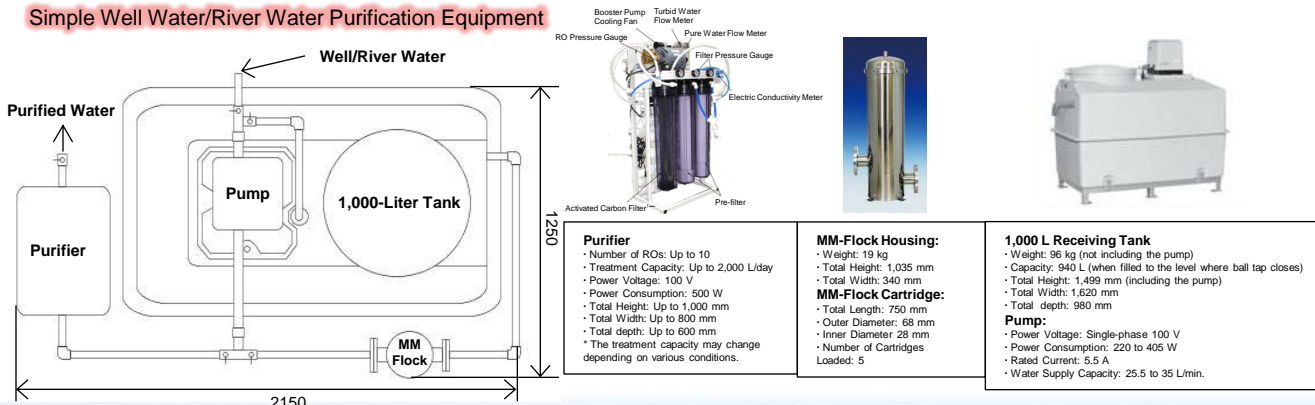
## Outline (Technical Principle and Operation)



1. Since the particles in water usually have high zeta potential that cause repulsion, they are dispersed stably.  
Particles: Inorganic and organic pollutants
2. When the particles repelling each other in a stable condition contact the MM-Flock, their zeta potential changes.
3. As zeta potential reaches zero, the particles become unstable and autoagglutination develops.



## Simple Well Water/River Water Purification Equipment



## Product Introduction

Hokkaido Clean System (JR group company): Equipment for treating wastewater containing floor wax scales

Consortium for Advanced Semiconductor Materials and Related Technologies (CASMAT): Equipment for treating wastewater generated during the development of semiconductor materials

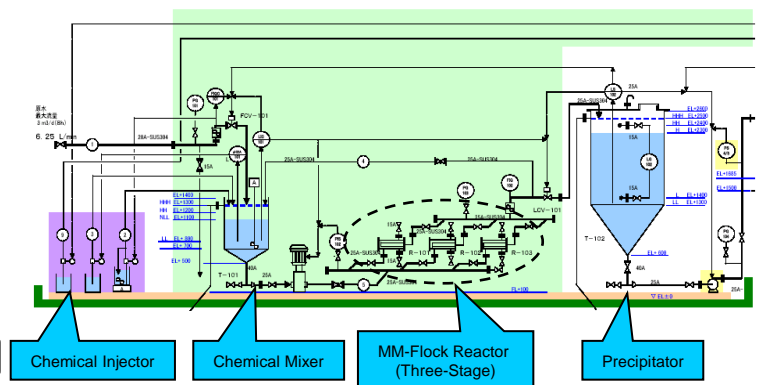
Company S (semiconductor wafer producer): Pretreatment Equipment for reproducing pure water from semiconductor wafer rinse water

Company N (solar cell wafer producer): Equipment for treating waste rinse water from the wafer production process. (under consideration)

### Equipment Photo



### Treatment Flow Diagram



## Effects

- MM-Flock is a new wastewater treatment material.
- The principle is that the system purifies water by controlling the zeta potential of the contaminating particles (suspended solids: SSs) in wastewater through contact with the MM-Flock, and promoting autoagglutination of the SSs.
- This method is effective for removing SSs with a size between 100 nm to 0.1  $\mu\text{m}$  from wastewater with an SS concentration of 1% or lower that has proved difficult to treat using the conventional coagulation method.

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