

# Flow control method

## Controlling flow for efficient resource recovery

### Overview

In the recovery of underground resources such as oil and geothermal energy, water flows from an injection well and fluids containing resources are pumped from a production well. There are multiple channel networks from an injection well to a production well, each having different fluidity. Since fluid preferentially flows through channel networks with high fluidity, there has been a problem that resources cannot be efficiently recovered from channel networks with low fluidity. Conventionally, in order to recover more resources from channel networks with low fluidity, it is necessary to drill additional wells, but each well costs several hundred million yen.

The present invention has found a method to reverse the magnitude of the flow performance (flow velocity) of each channel with different fluidity. In other words, the present invention is expected to increase the fluidity of channel networks with low fluidity and contribute to efficient resource recovery.

### Product Application

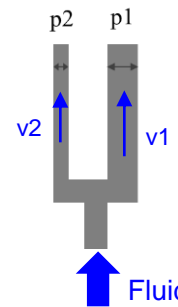
- ❑ Resource extraction (Oil, shale gas, geothermal etc.)
- ❑ Carbon dioxide Capture and Storage (CCS)

### IP Data

IP No. : PCT/JP2023/039431  
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 Admin No. : T23-028

### Features・Outstandings

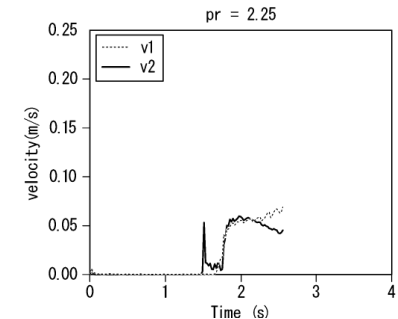
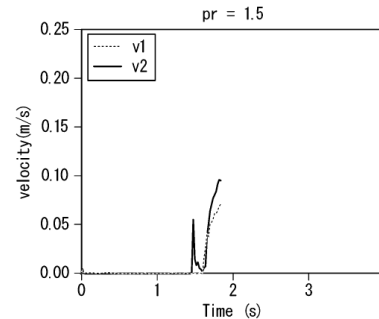
#### 【 Conditions of implementation 】



p1 [mm]	p2 [mm]	pr = p1/p2
6	4	1.5
9	4	2.25

Inflow velocity : 0.05m/s  
 v1 ... Average velocity of p1  
 v2 ... Average velocity of p2

#### 【 Result 】



**The velocity is reversed at pr=1.5 and pr=2.25**

### Contact