

ABSTRACT

An ion-exchange membrane electrolysis device includes an ion-exchange membrane electrolytic cell and an integrally formed integrated flow channel device. The ion-exchange membrane electrolytic cell generates a gas comprising hydrogen. The integrated flow channel device has a first setting structure, a water tank structure, a gas flow channel system and a water flow channel system. The water tank structure accommodates water. The first setting structure is configured for removably fixing the ion-exchange membrane electrolytic cell to the integrated flow channel device. The water flow channel system connects the water tank structure and the first setting structure for inputting the water in the water tank structure into the ion-exchange membrane electrolytic cell. The gas flow channel system is connected to the first setting structure for receiving and transporting the gas comprising hydrogen. Therefore, the present invention integrates functionally independent pathways, decreases pipeline connections, reduces volume of device, and improves safety of operation.

Figure 2