Tohoku Univ. Technology

Low environmental impact alkaline water electrolysis system

The alkaline water electrolysis system to suppress production of harmful substances

Overview

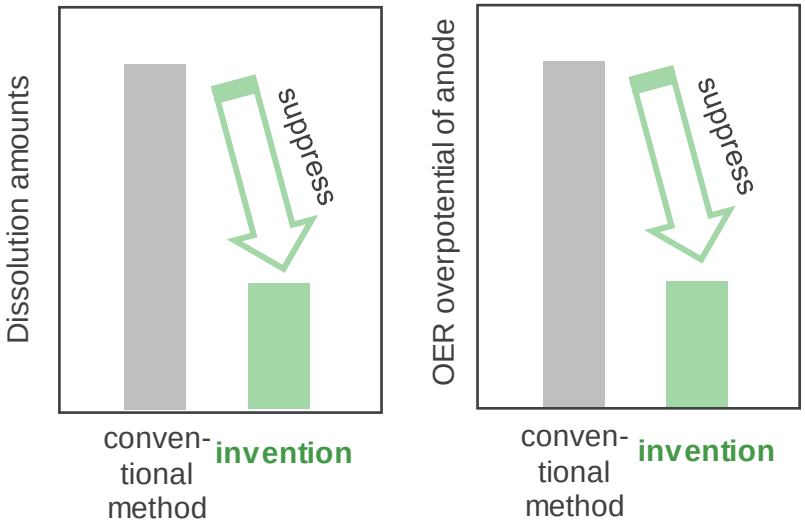
To realize a low-carbon society, alkaline water electrolysis equipment, which uses renewable energy to electrolyze water and produce hydrogen, is attracting attention. However, the nickel (Ni) electrode used for the anode of conventional alkaline water electrolysis equipment degrade under fluctuating electric power derived from renewable energy. In addition, stainless steel which is one of the alternative anode material for Ni have the problem that chromium elute into the alkaline electrolyte and generate toxic hexavalent Cr during the electrolysis.
In the invention, in order to solve the above problems, a certain ingenuity has been applied to solve the conventional problem of electrode performance degradation, and the dissolution amount of Cr has been successfully suppressed.

Product Application

- ☐ Alkaline water electrolysis system
- ☐ Alkaline water electrolyzer

Features･Outstandings

The imagine of the invention



The invention can

- **suppress the dissolution amount of chromium**
- **lowering overpotential of anode**

- Because the patent is not published to the public, a non-disclosure agreement or an option agreement are required for further disclosure. Please feel free to contact us for more information.

IP Data

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