NANO ADVANCED

NANO H_2
Advanced.Consulting

Modification of the source component and control system of PEM electrolyzers towards increased operational reliability and comprehensively higher efficiency of electrolytic components.

The hydrogen economy is crucial for Europe, but the inefficiency of the electrolysis process (electricity → H2) is a barrier to development. When using the NANO advanced el. and the downstream PEM electrolyzer to reduce the loss to 10-15%, which is at the system level of power line losses. The power supply component, which feeds the electrolytic bundles using renewable electricity at the input, is sized for a different architecture and operates with a comprehensively different approach than is currently used.

Unique selling points:

- Higher generator efficiency – more kg H2 per kW of energy consumed – higher operating yields – greater profitability
- Higher control system flexibility – uniform loading of PEM electrolyser components – significantly lower OPEX – higher yield
- System modularity – ability to change components on the fly – continuous operation
- The facility will also be advantageous as an electricity storage solution

Product

Increasing the efficiency of green hydrogen generators

Technology readiness

Development

Proof of concept

▶ Prototype

First implementation

Extensive implementation

1/2023

B2C

www.nanoadvanced.cz