

Development of co-electrolysis SOEC system

Performance evaluation and prototype production

We provide comprehensive support for the development of co-electrolysis technology, which produces fuel from CO₂ and steam, from cell stack evaluation to system development.

Circumstance Co-electrolysis using solid oxide electrolysis cells (SOEC)

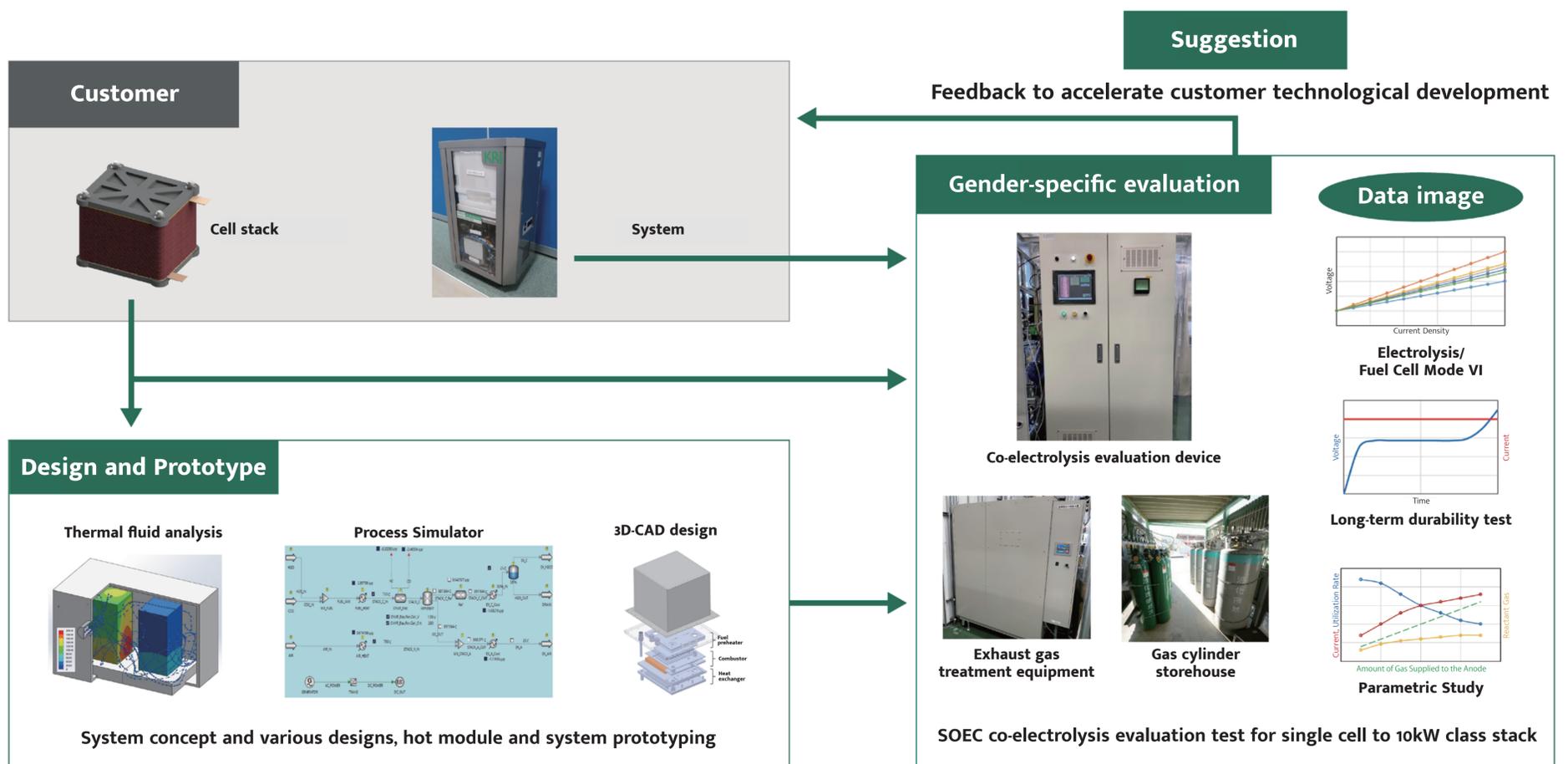
- Co-electrolysis is a technology that simultaneously electrolyzes CO₂ and H₂O to convert them into a CO and H₂ mixed gas (synthetic gas), making it useful for producing e-fuel (synthetic fuel).
- Highly efficient syngas yields are required, but as raw material utilization rates increase, there are challenges, such as reduced cell stack durability.
- System design must be tailored to changes in renewable energy supply, the utilization of excess heat, and the integration of upstream and downstream equipment.

Fuel synthesis flow via co-electrolysis



KRI's proposal for support in developing a co-electrolysis SOEC system

We help various customers with the development of co-electrolysis technology.



- We support our customers in solving problems with co-electrolysis testing through IV measurements, analysis by gas composition, and more.
- We can evaluate electrolysis with 24-hour continuous operation, from single cells to 10kW-class stacks.
- We handle everything from SOEC system design to prototyping and evaluation.
- We also provide partial support, including system development support, system design, numerical analysis, and system evaluation.

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