



SOLIDpower SpA

PRESS RELEASE

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Breakthrough in solid oxide electrolyser durability

SOLIDpower S.p.A.

Sede legale e produttiva:
via Trento 115/117
c/o BIC - Mod C/D
38017 Mezzolombardo
(TN) Italy

Capitale sociale deliberato
€ 15.775.983,45
sottoscritto e versato
€ 11.483.466,85
C.F. e P.I. Registro Imprese
di Trento n.02000340220

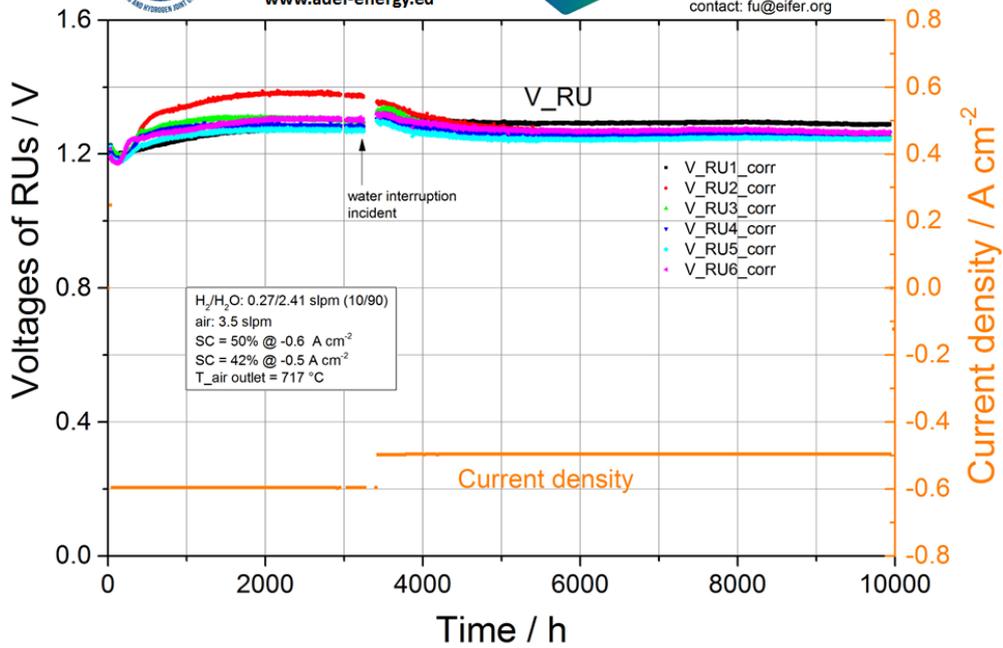
t. +39.0461.17.55.068
f. +39.0461.17.55.050
info@solidpower.com

www.solidpower.com

A high temperature solid oxide electrolysis stack has been operated over 6'000 hours at 700°C 0.5A/cm² without significant degradation. This is a premiere for this technology.

Within the FCH-JU project ADEL (ADvanced ELectrolysers - adel-energy.eu) with 13 partners, this durability test on a SOLIDpower stack is being performed at EIFER, Karlsruhe Germany. The test, started at the end of the project ADEL has now exceeded 10'000h of operation and is continued. The short stack (6 cells, 300cm² active area) was initially operated at 700°C, - 0.6A/cm², 50% steam conversion. After 3000h, the stack experienced an accidental water supply interruption. The test was continued at - 0.5A/cm², 42% steam conversion. Thereafter, the average degradation rate has dropped to 4µV/h, corresponding to around 0.3%/1'000h. This durability opens the perspective to operate solid oxide electrolysers for 60'000 hrs, resulting in significant cost reduction for the hydrogen production. Solid oxide electrolysers are the most efficient electrolyser technology available with electricity to hydrogen conversion efficiencies in the range of 85 to 95%.





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Durability test results performed on SOLIDpower's solid oxide electrolysis stack performed by the EIFER institute in Karlsruhe, Germany.

For more information please contact:

Olivier Bucheli
SOLIDpower
26, av des Sports
1400 Yverdon-les-Bains
Switzerland
Olivier.bucheli@solidpower.com
+41 78 746 45 35

