EPE '22 ECCE EUROPE September 5-9, 2022 Hannover, Germany

Status quo and future prospects of power electronic solutions for electrolysis plants

Sven Schumann
Siemens Energy

Abstract:

Power electronics plays an important role in the realization of electrolysis applications as the planned and realized plant sizes are growing rapidly. Based on the typical load profile of a PEM electrolyser, examples from realized plants are presented, considering the electrical power supply. An outlook into the future shows expected key requirements for the grid connection to increasingly challenged power networks and the connection to renewable power sources.

Curriculum Vitae:

Sven Schumann received his Master of Science degree in Electrical Power Engineering and Business Administration from the Rheinisch-Westfälische-Hochschule Aachen (RWTH Aachen) in 2012. He received his PhD degree from the same university in 2017 in the area of high voltage insulation, supervised by Prof. Schnettler from the Institute of High Voltage Technology. Since 2022 he is heading the the Primary & Secondary Electrical Engineering group at Siemens Energy, which participates in the development and erection of electrolysis plants. Before, he worked as Systems Engineer for electrolysis plants, as researcher for digitalization in manufacturing at Siemens AG, and as chief engineer at the Institute of High Voltage Technology at RWTH Aachen.

Contact Details:

Dr. Sven Schumann
Siemens Energy
Freyeslebenstr. 1
91058 Erlangen, Germany
+49 (173) 5842435
sven.schumann@siemens-energy.com