

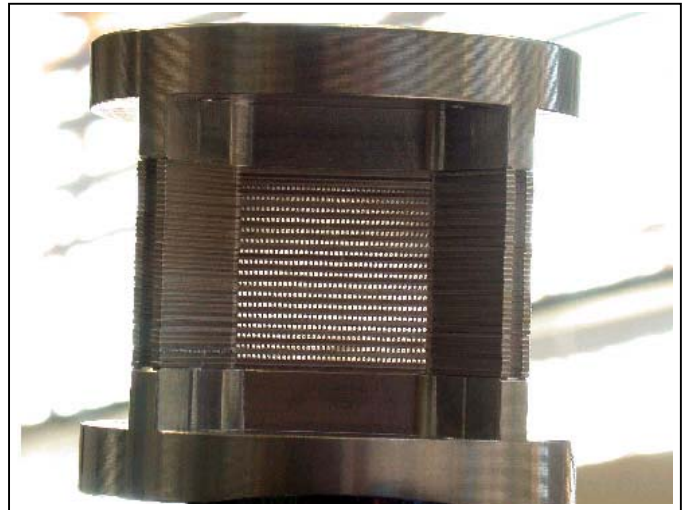
Project Information

Subject: Fuel Gas Generator Unit, High Power Density, for Liquid Fuels

Applicant: STEAG encotec GmbH
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Project Partner: Volkswagen AG
FZ Jülich GmbH (IWV 3)

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Description of Project:

In cooperation with Volkswagen AG and Forschungszentrum Jülich GmbH (Institute for Materials and Processes of Energy Engineering) STEAG encotec GmbH works on the development of a highly-efficient reformer. Within the scope of the project “fuel gas generator unit, high power density for liquid fuels” a process engineering layout for the hydrogen production from diesel fuel is developed. The performance of various catalysts is measured, and suitable reactors are designed.

Mobile systems necessitate a compact design of all apparatuses. An important focus is the screening of shift catalysts, their application on microstructures and the ensuing design of a compact shift reactor.

The process of fuel gas generation and treatment consists essentially of the following stages:

- * fuel heating, evaporation and superheating
- * reforming
- * shift reaction
- * CO fine purification

An optimised design and process control will improve the dynamic behaviour, which is absolutely necessary for mobile fuel cell systems. To achieve this goal microstructured engineering components are integrated in the components.