

## Project Information

**Subject:** ADELHEID- Aus dem Labor heraus in die Lüfte

**Applicant:** Forschungszentrum Jülich GmbH

**Project Duration:** 1.1.2010 – 31.12.2012

**Project Partners:** Presswerk Struthütten GmbH  
 Thomas Magnete GmbH  
 GSR Ventiltechnik GmbH & Co. KG  
 FRIGOBLOCK Grosskopf GmbH

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### Project description / Status of work:

The project ADELHEID is focused on the core component of fuel processing, i.e. the reformer. The main challenge for the development of an economic reasonable reformer technology is cost reduction. Within the ADELHEID project the scientific expertise of Jülich will be transferred via a technologically oriented development into an industrial production technique. Therefore, the industrial partners Thomas Magnete and Presswerk Struthütten contribute with their expertise on automotive technology and on manufacturing of pressure vessels. The consortium will be completed by GSR Ventiltechnik – a manufacturer of an innovative rapid reaction valve and FRIGOBLOCK Grosskopf as manufacturer of transport refrigeration machines for truck applications.

The demand on electricity in mobile applications increases in nearly all future prospects. Reasons for such a development are electric devices for more comfort and a guaranteed energy supply during idling mode. Today combustion engines and turbo jet engines were applied as auxiliary power units (APU) on-board of trucks and air planes. Fuel cells are envisaged as an environmental friendly and high efficient energy conversion system for future systems. Usually for logistical reasons, APUs must use the same fuel as the main engine. This will be kerosene or JET A-1 for air planes and diesel for trucks and ships. The reformer must be converted these fuels into hydrogen rich gas – the fuel for low temperature fuel cells such as HT-PEFC.



**Funded by**  
**the State of North Rhine-Westphalia and the EU**

