Papers Title

FUEL CELL TECHNOLOGY – READY FOR TAKE-OFF?

Author

Thomas Heissenberger

Company

AUSTRIA FERNGAS Gesellschaft m.b.H.
Schubertring 14
A-1010 Wien
AUSTRIA

Abstract

The principle of the fuel cell has been well known for more than 150 years. In simplified words, it is only putting hydrogen and oxygen together and getting electricity, heat, pure water and – very important – no pollutants. In reality, it is of course not as simple as described – otherwise fuel cells would be a very common technology for energy production.

Up to now the only real commercial application is in space technology. In stationary energy production some units from a few kW to some MW have been in a testing phase. Some hundred units have been in operation worldwide. Most of them are demonstration units at gas companies. The reason is that it is relatively easy to produce hydrogen from natural gas. Therefore the mentioned technology is of high interest for the energy industry – clean, highly-efficient energy.
In the last years the car manufacturers showed an increased interest in the environment-friendly fuel cell technology. They plan to sell lots of fuel cell driven cars in this century, although at the moment only some prototypes exist.

The paper concentrates mainly on the following items:

- The 8 years of user-experience of AUSTRIA FERNGAS with two “commercial” fuel cell plants for decentralised power production. How mature is the technology?
- Which hurdles have to be overcome in order to get into the business?
- What is the influence of the liberalisation of the European energy markets?
- Where are the possible applications for fuel cells especially in Europe?
- Are there synergies between stationary and mobile applications?