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Overview of developments of hydrogen technology

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Hydrogen technology is meanwhile recognized as key to enable decarbonisation and the use of large scale renewable energy for several industrial sectors. Zentrum für BrennstoffzellenTechnik GmbH (ZBT) is a development centre located in Duisburg Germany to support the industry with the development of hydrogen and fuel cell technology. This presentation will explain the main technologies and products that are being developed and general trends with a focus to the transportation sector including corresponding scaling and cost challenges for the industry. IHI Hauzer, one of the industrial partners of ZBT, is a coating equipment manufacturer for the automotive sector and is developing low cost coating technology for fuel cell bipolar plates. Coated steel is seen as the most promising material for bipolar plate manufacturing as this enables compact size, long fuel cell life time and low cost. Now that many coatings have been tested meanwhile by the automotive industry, the main challenge is to scale up while maintaining high quality. This presentation will show the coating test results and solutions for high volume manufacturing.

Keywords

Hydrogen technology

Fuel cell technology

Bipolar plate coating

High volume equipment