Establishing an extreme-climate chamber for testing vehicle fuel cell systems

Institut für Verbrennungskraftmaschinen
und Brennstoffzellen

Description

Smart mobility, with keywords: electrification, hydrogen, and fuel cells, will continue being a major German and European strategy (e.g., Climate Action Plan 2050) for the next a few decades. Facilitating its realization in both road and air transportation sectors, an extreme-climate chamber will be constructed at ivb for testing mobile hydrogen fuel cell systems. This test chamber to-be will initially allow for low sub-zero temperatures, sub atmospheric pressures, and remote-experiment capabilities. Within this thesis work, the chamber will be designed and hopefully constructed that is able to contain a singular fuel cell and a short stack.

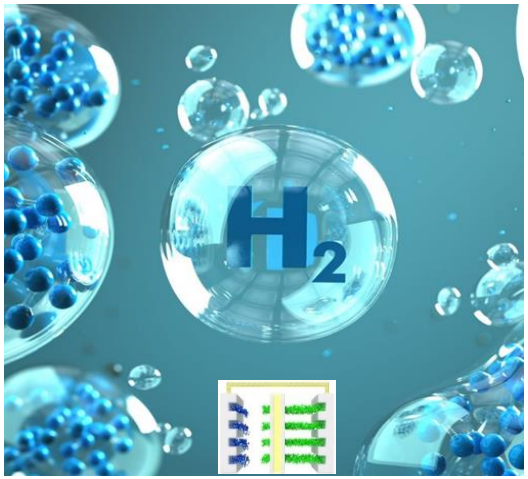
Your responsibilities

- Literature and regulation surveys on climate envelopes for road/air vehicle engines
- Consulting, designing and establishing the climate chamber
- Documentation the establishing process and conceiving a user manual
- Participation in regional conferences/workshops is also encouraged

Prerequisites

- Working independently with teamwork mindset
- Basic knowledge of fuel cells and cryogenics would be helpful
- Good knowledge of German or English, both written and spoken

Die TU Braunschweig strebt in allen Bereichen und Positionen an, eine Unterrepräsentanz im Sinne des NGG abzubauen. Daher sind Bewerbungen von Frauen besonders erwünscht und können nach Maßgabe des §11 NGG bevorzugt berücksichtigt werden. Schwerbehinderte werden bei gleicher Eignung bevorzugt. Ein Nachweis ist beizufügen. Zu Zwecken der Durchführung des Bewerbungsverfahrens werden personenbezogene Daten gespeichert.



Source: https://www.crowcon.com/de/blog/blue-hydrogen-an-overview/

Starting: **Soon in 2024**

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- [x] Bachelor Thesis
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- [x] theoretical
- [ ] simulative
- [x] experimental

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