

HYDROVILLE



Hydrogen passenger shuttle, 14m by 4.2m



Innovation

- Dual fuel hydrogen diesel co-combustion engine with pressurized hydrogen



Emission reduction (@2800 rpm)

- CO₂ : 58-73%
- PM : 57%
- NO_x : 65%



Assets

- Sailing laboratory to test new hydrogen technologies
- Demonstration vessel to raise awareness and inform
- Shuttle service for CMB staff to avoid traffic jams
- 16 passengers
- Cruise speed 20/22 kn
- Sea-going vessel



Next steps

- Develop
 - Dual fuel (hydrogen – diesel) combustion engines which reach displacements of up to 85% H₂
 - Mono fuel hydrogen engine with NO_x <0.2gr/kWh without the need for after treatment

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The future

- The Hydroville project is just the start of a hydrogen journey which CMB is undertaking. More powerful engines with this hydrogen technology are being developed and larger vessels are being designed.
- The following vessels are being designed and built:
 - Crew transfer vessel for the offshore wind parks (2000hp, 225kg of H₂)
 - Passenger ferry for 80 passengers (1400hp, 125kg H₂)
 - Harbour tug boat (5000hp, 400kg H₂)
- Medium speed engines (mono fuel hydrogen as well as dual fuel hydrogen – diesel) are being developed which can produce up to 2.8MW.
- The first marine and public hydrogen refuelling station is being constructed and will also hold a 1MW PEM electrolyser which will produce green hydrogen from renewable energy. The site has a high pressure / high volume hydrogen compressor.



More information

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