

Case study 1

From blast furnace gas to transport fuels for ships



The FReSMe consortium has achieved a major breakthrough by producing low emission methanol from real blast furnace gas. This is the first demonstration that the valorisation of residual steel gases is feasible at large scale using actual blast furnace gas that will be used as fuel in the ship transportation sector.

- ▶ Capture of CO₂ from BFG
- ▶ Conversion of CO to H₂
- ▶ Separation H₂ from N₂
- ▶ Synthesis of Methanol

FReSMe successfully achieved its three key objectives:

1. The optimisation of the technologies involved.
2. Their integration in a pilot plant.
3. The end use demonstration of methanol as marine fuel.

20t methanol successfully demonstrated for use as marine fuel for ship transportation at the Stena Germanica ferry sailed from Gothenburg to Kiel.

Acknowledgements

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**€76m in projects and approx.
€20m in equipment.**

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| ▶ STEPWISE | No. 640709 | 2015-2019 |
| ▶ FReSMe | No. 72750 | 2017-2021 |
| ▶ C4U-project | No. 884418 | 2020-2024 |
| ▶ Initiate-project | No. 958318 | 2021-2025 |
| ▶ CaLby2030 | No. 101075416 | 2022-2026 |

